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AMERICAN ASSOCIATION
FOR
STUDY and PREVENTION
OF
INFANT MORTALITY

TRANSACTIONS OF THE SIXTH ANNUAL
MEETING

PHILADELPHIA, NOVEMBER 10-12, 1915

Headquarters of the Association
Medical and Chirurgical Faculty Building
1211 Cathedral Street, Baltimore, Md.

PRESS OF
FRANKLIN PRINTING COMPANY
BALTIMORE
1916

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Acknowledgment is hereby made to the Select and Common Council of Philadelphia for its generous contribution toward the cost of printing this report.

TABLE OF CONTENTS

Directors, 1914-1915	5
Committees, 1914-1915	6
Directors, 1915-1916	9
Report of Meeting	15
Report of Executive Secretary	21
Report of Treasurer	26
Address by Hon. Rudolph Blankenburg, Mayor of Philadelphia.....	27
Address by the President, Homer Folks, LL. D., Are Babies Worth Saving? Infant Welfare Work: Its Purposes, Opportunities and Agencies.....	31
Sessions:	
Pediatrics:	
Statement by the Chairman, Charles A. Fife, M. D.....	43
The Statistical Study of Respiratory Diseases as a Factor in the Causation of Infant Mortality, Wm. C. Woodward, M. D.....	44
The Prevention of Respiratory Disease in Early Life, Royal Storrs Haynes, M. D.....	55
The Treatment of Respiratory Diseases, with Special Reference to the Value of Fresh Air, John Lovett Morse, A. M., M. D.....	70
Discussion	75
Obstetrics:	
Statement by the Chairman, Mary Sherwood, M. D.....	89
The Education, Licensing, and Supervision of the Midwife, J. Clif- ton Edgar, M. D.....	90
Is the Midwife a Necessity?, J. M. Baldy, M. D.....	105
Progress Toward Ideal Obstetrics, Joseph B. DeLee, M. D.....	114
Discussion	123

Round Table Conference, Obstetrics

Reports:

New England Sub-Committee, J. Lincoln Huntington, M. D., Secretary	139
New York and New Jersey Sub-Committee, George W. Kosmak, M. D., Chairman	141
Kentucky Sub-Committee, Elisabeth Shaver, R. N., Chairman ..	144
California Sub-Committee, Adelaide Brown, M. D., Chairman..	145
Hawaii	147
Philippine Islands	148
Japan	148
Oakland, Alameda, Berkeley	149
Discussion	151

Economic Aspects of Infant Welfare:

Address by the Chairman, Sherman C. Kingsley.....	162
Maternity Insurance, Lee K. Frankel, Ph. D.....	173
To What Extent May the Mother Substitute Proprietary Prepara- tions for the Advice of a Physician?, Carl L. Alsberg, M. D... ..	197
Discussion	201

Eugenics:

Chairman, Wm. F. Snow, M. D.	209
The Value of Negative Genetics, E. G. Conklin, Ph. D.....	210
The Prenatal Problem and the Influences Which may Favorably Affect This Period of the Child's Growth, Mrs. Max West.....	219
Preparation for Motherhood, Florence H. Richards, M. D.....	229
Methods of Developing or Modifying in each Child During His Growth to Maturity the Heritage Received From his Parents, Paul Popenoe	233
Discussion	216, 240

Care of Homeless Babies:

Statement by the Chairman, Albert Cross	243
The Possible Reduction of Mortality among Sub-Normal Institu- tional Babies, S. Josephine Baker, M. D.	244
The Wet-Nurse Directory of Boston, George R. Bedinger	252

TABLE OF CONTENTS

13

Institutions as Foster Mothers for Infants, Alfred F. Hess, M. D...	255
Discussion	265
Nursing and Social Work:	
Statement by the Chairman, Ella Phillips Crandall, R. N.	279
Report of a Study of Selected Communities, Where Infant Welfare Nursing is Done on a Small Scale, Bessie S. Le Lacheur, R. N.	281
Cooperation for Public Health, Richard P. Borden.....	295
Community Nursing in Dayton, Ohio, Elizabeth G. Fox, R. N.....	305
The Question of Smaller Nursing Districts for all Kinds of Public Health Work versus Larger Districts for Specialized Work, H. J. Gerstenberger, M. D.	315
Generalization or Specialization?, Marie T. Phelan, R. N.....	333
Discussion	305, 337
Round Table Conference, The Care of Children Between the Ages of Two and Six Years, Chairman, Eliza McKnight, R. N.....	349
Report of Committee on Prenatal Care Records, J. Whitridge Williams, M. D., Chairman	357
Affiliated Societies, Reports of	365
Membership List	443
Index	469

The Seventh Annual Meeting of the American Association for Study and Prevention of Infant Mortality will be held at Milwaukee, October 19-21, 1916.

SIXTH ANNUAL MEETING
of the
AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT
MORTALITY

The sixth annual meeting of the American Association for Study and Prevention of Infant Mortality took place in Philadelphia November 10-12, 1915. In connection with the meeting a joint session was held with the Philadelphia County Medical Society, at the College of Physicians, on Economic Aspects of Infant Welfare. All other sessions were held at the Bellevue-Stratford Hotel. The address of the President, Mr. Homer Folks, was presented at the general session, Thursday night, November 11.

SESSIONS

The sessions were held as follows:

Wednesday morning, November 10:

Pediatrics. Dr. Charles A. Fife, Philadelphia, Chairman

Wednesday afternoon:

Obstetrics. Dr. Mary Sherwood, Baltimore, Chairman

Wednesday night:

Economic Aspects of Infant Welfare. Joint Session with Philadelphia County Medical Society. Mr. Sherman C. Kingsley, Chicago, Chairman

Thursday morning, November 11:

General Session. Annual business meeting of the Association. Reports of affiliated societies

Thursday afternoon:

Eugenics. Dr. Wm. F. Snow, New York City, Chairman

Care of Homeless Babies. Mr. Albert Cross, Philadelphia, Chairman

Round Table Conference, Obstetrics

Thursday night:

General session. Mayor Rudolph Blankenburg, of Philadelphia, presiding.

Address by the President, Mr. Homer Folks, New York, followed by an informal reception

Friday morning, November 12:

Nursing and Social Work. Miss Ella Phillips Crandall, New York City, Chairman

Business Meeting of the Association.

Friday afternoon:

Round Table Conference, Nursing and Social Work. Miss Eliza McKnight, Philadelphia, Chairman

Two meetings of the Board of Directors were held, the first on Wednesday morning, and the second, Thursday afternoon. The regular meeting of the Executive Committee preceded the first meeting of the Board of Directors, and the meeting for organization of the incoming Executive Committee took place on Friday, November 12, immediately after the close of the morning session.

Reports presented by the Executive Secretary and Treasurer are to be found on pages 21-26.

On behalf of the Committee on the Educational Leaflet and Booklet, the Chairman, Dr. Gerstenberger, reported that the United States Public Health Service had had 315,000 copies of the Booklet printed; of that number 175,000 have been distributed, and 140,000 are on hand. He reported also that 47,100 copies of the Leaflet have been ordered since April, 1913; of that number 38,600 have been distributed from the Executive Office of the Association, and the rest have been used by affiliated societies.

Record forms for use in prenatal work were submitted for the approval of the Directors by Dr. J. Whitridge Williams, on behalf of the Committee on that subject. In order that due consideration could be given the proposed forms, the Committee was requested to have them printed and to submit them to all of the Directors. The report of the Committee and copies of the forms are to be found on pages 357-363.

Reporting for the Committee on Baby Health Conferences, Dr. H. L. K. Shaw, chairman, recommended the endorsement of the score card published by the American Medical Association. This was put to vote and carried.

The following committees were appointed by the President:

Nominations—

Dr. Howard Childs Carpenter, Philadelphia, Chairman
Miss Minnie H. Ahrens, Chicago
Mr. George R. Bedinger, Boston
Dr. J. H. Mason Knox, Jr., Baltimore
Dr. Philip Van Ingen, New York City

Resolutions—

Dr. H. J. Gerstenberger, Cleveland, Chairman
Dr. T. B. Cooley, Detroit
Mrs. Wm. Lowell Putnam, Boston

Transactions—

Dr. John S. Fulton, Baltimore, Chairman
Dr. Joseph S. Neff, Philadelphia
Miss Gertrude B. Knipp, Baltimore

The following committees were continued:

Prenatal Record Forms
Traveling Exhibit
Educational Leaflet and Booklet

CHANGE IN THE CONSTITUTION

Section 1, Article IV, of the By-Laws was amended to read as follows: (The paragraph in italics having been added to the original Article)

SECTION 1. The Board of Directors shall appoint an Executive Committee, consisting of nine of its members, of whom the President, the President-elect and Secretary shall be members ex-officio. At least one of the other members shall be chosen to represent the city at which the next annual meeting is to be held.

In addition to the above nine members of the Executive Committee, there shall be one member, at large, to represent especially the members and affiliated organizations on the Pacific Coast and far West. This member shall be notified of all meetings of the Executive Committee, and, if present, shall have a vote on all matters.

BUSINESS SESSIONS

Business meetings of the Association were held Thursday, November 11, and Friday, November 12.

AFFILIATED SOCIETIES

Brief reports were made verbally by representatives of the affiliated societies at the session on Thursday morning. The report of the Executive Secretary, presented at the same session, showed that 135 societies engaged in baby saving activities were identified with the Association, and that 65 had sent written reports, which would be condensed and published in the Transactions. *See page 365.*

ELECTION OF DIRECTORS

The following Directors whose terms had expired were re-elected for a term of five years:

Miss Jane Addams, Chicago	Dr. J. Morton Howell, Dayton
Miss Minnie H. Ahrens, Chicago	Dr. James L. Huntington, Boston
Dr. T. B. Cooley, Detroit	Dr. Abby L. Marlatt, Madison
Prof. Irving Fisher, New Haven	Dr. Helen C. Putnam, Providence
Dr. J. Whitridge Williams, Baltimore	

The following new Directors were elected for the terms indicated:

FIVE YEARS

Dr. W. N. Bradley, Philadelphia	Dr. J. Gurney Taylor, Milwaukee
Dr. Thomas McCleave, San Francisco	Dr. Charles E. Terry, Jacksonville
Mrs. Duncan McDuffie, Berkeley	Dr. L. R. Williams, Albany
Dr. Lenna Meanes, Des Moines	Dr. James R. Young, Boston

THREE YEARS

Miss Eliza McKnight, Philadelphia

TWO YEARS

Dr. George C. Ruhland, Milwaukee

OFFICERS FOR 1916

At their meeting Thursday afternoon, November 11, the Directors elected

Dr. Wm. C. Woodward, Washington, President for the year beginning November 16, 1915

At the same time the Board declared

Dr. S. McC. Hamill, Philadelphia, the President-elect, President for 1915-1916

The Board then elected the following other officers for the year beginning November 16, 1915:

First Vice-President, Dr. Joseph S. Neff, Philadelphia
Second Vice-President, Dr. Thomas McCleave, San Francisco
Secretary, Dr. Philip Van Ingen, New York City
Treasurer, Mr. Austin McLanahan, Baltimore
Executive Secretary, Miss Gertrude B. Knipp, Baltimore

EXECUTIVE COMMITTEE

Dr. S. Mc. Hamill	Miss Julia C. Lathrop
Dr. Wm. C. Woodward	Miss Harriet L. Leete
Dr. Philip Van Ingen	Dr. Joseph S. Neff
Dr. J. G. Taylor	Dr. J. Whitridge Williams
Dr. J. H. Mason Knox, Jr.	Dr. Wm. Palmer Lucas

The following resolutions were reported favorably by the Committee and were unanimously adopted by the Association:

Whereas, the American Association for Study and Prevention of Infant Mortality is in receipt of a communication from the National Child Labor Committee, requesting the Association's endorsement of a bill to be introduced in the next Congress, providing for national regulation of child labor; and

Whereas, the present lack of uniformity of such legislation in the different States seems to be an economic disadvantage to those States having the best laws; and

Whereas, therefore, uniform regulations throughout all the States are essential to the success of this very important movement

Be It Resolved, That the American Association for Study and Prevention of Infant Mortality hereby express itself as heartily in favor of proper federal child labor legislation, and ready to cooperate to the extent of its ability in the effort to obtain such legislation.

Whereas, from time to time legislation is proposed which, while purporting to regulate the traffic in narcotic and habit-forming drugs, in reality usually exempts from its provisions preparations containing such drugs in small quantities; and

Whereas, such a law would permit the sale of many proprietary remedies for infants, the indiscriminate use of which would do great harm;

Be It Resolved, That the American Association for Study and Prevention of Infant Mortality refuses to endorse any narcotic law the effect of which is to continue the unrestricted sale of narcotic and habit-forming drugs in any amount.

Whereas, the American Association for Study and Prevention of Infant Mortality is in receipt of a communication from the Children's Bureau of the Department of Labor, requesting the Association's cooperation in furthering a nation-wide Baby Week Campaign, planned by the General Federation of Women's Clubs, for the week of March 4 to 11, 1916;

Be It Resolved, That the Association pledge to the Children's Bureau and the Federation its assistance and support in any way that lies within its power.

Whereas, the majority of the deaths of infants occur during the first few weeks of life; and

Whereas, efforts to reduce infant mortality depend largely for success upon bringing the child under proper supervision and care as early as possible; and

Whereas, a prompt reporting of births is therefore essential as a basis for successful efforts to reduce infant mortality; therefore

Be It Resolved, That the American Association for Study and Prevention of Infant Mortality urge each state and municipality to pass laws providing for the reporting of births within five days, at the most, from their occurrence, and further providing adequate penalty for failure to observe this law.

Whereas, in the death of its former President, Dr. Charles R. Henderson, the American Association for Study and Prevention of Infant Mortality has met with a great loss,

Be It Resolved, That the following memorial be spread upon the minutes of the Association, and that a copy in suitable form be sent to his family:

The death of Dr. Charles R. Henderson is a loss to every branch of social service. His great heart found room for every human interest. His love for humanity was all-embracing. It was not by accident that Dr. Henderson, the great preacher, became Professor Henderson of the Department of Sociology of Chicago University; President of the National Conference of Charities and Correction; President of the American Prison Association; President of the International Prison Commission; President of the American Association for Study and Prevention of Infant Mortality; and President of the Chicago Bureau of Charities. He was a leader in each of these great departments of philanthropy.

When he spoke there was a benignity in his physical presence, the expression of his countenance, the intonation of his voice, which gave him instant hearing. The proceedings of the philanthropic societies of America bear eloquent testimony to the breadth of his vision and the versatility of his thought.

Dr. Henderson had a large conception of the problems which are studied by this Association. In his address as President of the National Conference of Charities and Correction in Cincinnati in 1899, he said: "We must resist, by all available means, the deterioration of the common stock, the corruption of blood, the curses of heredity. It must be included in our plan that more children will be born with large brains, sound nerve, good digestive organs and love of independent struggle. We wish the parasitic strain, the neuropathic taint, the consumptive tendency, the foul disease, to die out. These are social ends, and it is the duty of philanthropists to include them in every programme."

Dr. Henderson represented the spirit of altruism, discrimination, understanding, patience, optimism, consecration and self-sacrifice, which are the highest attributes of the true lover of mankind.

Whereas, the success of the Sixth Annual Meeting of the American Association for Study and Prevention of Infant Mortality, held in Philadelphia, November 10-12, 1915, has been due largely to the interested and active cooperation of the City of Philadelphia and its citizens, and, among the local organizations, committees and individuals the following, therefore

Be it Resolved, That the sincere thanks and appreciation of the Association be hereby expressed to:

The Mayor of Philadelphia

The Bureau of Health

The Philadelphia County Medical Society for its cooperation in arrangements for the joint meeting; for its hospitality, and for the many courtesies extended

The Philadelphia Pediatric Society, for its invitation to the joint meeting of Pediatric Societies

The Philadelphia College of Physicians for the use of its hall for the joint session

The Philadelphia Child Federation for the use of its offices by the Committee on Local Arrangements during the months of preparation, and for many other courtesies extended the Association

The Local Committees, individually and collectively, for the admirable arrangements for the meeting

The various Associations interested in the welfare of mothers and children, for their help, cooperation, hospitality and demonstrations

The Pennsylvania Society of Colonial Dames for their hospitality

To Miss Rhoads and the young ladies associated with her at the Registry Table and Bureau of Information

To the local press and the press associations

To the management of the Bellevue-Stratford Hotel, for many courtesies extended.

Dr. S. McC. Hamill, the incoming President, was introduced to the Association by the outgoing President at the general session on Thursday night. The report of the Committee in charge of the Registration Table at the meeting showed that 403 persons registered; eighteen states, the District of Columbia, Canada and China were represented.

In connection with the meeting, the traveling exhibit owned by the Association was shown in the parlors of the Bellevue-Stratford Hotel. There was also a display of banners and charts outlining the work of more than fifty of the affiliated societies.

On the recommendation of the Executive Committee, the Association accepted an invitation extended through the medical societies, the Department of Health and the local organizations of Milwaukee, to hold the 1916 meeting in that city.

REPORT OF EXECUTIVE SECRETARY

November 16, 1914—November 15, 1915

In looking back over the year's work two things stand out clearly:—a closer coupling up with the activities of other national or international organizations, and a gradual broadening out of the scope of the work. Organizations with which we were brought into especially close contact include the American Public Health Association, the American Social Hygiene Association, the National Association for the Study and Prevention of Tuberculosis, the Public Health Nursing Organization, and the National Conference of Charities and Correction. We have also been in close touch with the Federal Children's Bureau, the U. S. Public Health Service, and the Bureau of the Census, and are indebted to them for advice and for material used in answering inquiries that have come from various sources.

The work has been carried on through correspondence and the exchange of information; through the publication and distribution of the annual Transactions and of the material that has been assembled by various committees; and through the use of the traveling exhibit. In addition to the regular meeting of the Association the year has been marked by a special conference on Institutional Mortality, arranged by invitation of the Children's Committee of the National Conference of Charities and Correction, and held during the annual meeting of that body in Baltimore, May, 1915. Arrangements are also under way for a district conference of the Pacific Coast members of the Association to be held in San Francisco before the close of the Pan American Exposition.

Some idea of the widespread and diversified interest in the subject can be gathered from the sources and character of the inquiries that have been received at the office. Our records show that these have come from 36 states, the Philippine Islands, Porto Rico, Cuba, Canada, Great Britain, Japan, Sweden, India, Bulgaria, and the Argentine Republic. Included among the sources from which they have come (not counting individuals), are infant and child welfare associations; nursing organizations; departments of health; university extension departments; departments of home economics in schools and universities; public libraries; women's clubs; anti-tuberculosis associations; associated charities; county and state fairs; Camp Fire Girls; schools of civics and philanthropy; children's aid societies.

Subjects on which information or printed matter was mostly frequently requested include

- Institutional Mortality
- Prenatal Care
- Conservation of child life
- Organization of infant welfare work
- Baby health conferences
- Statistics relating to infant mortality
- Care available for children between two and six years old
- Care available in rural communities
- Continuation schools of home-making

Material that had been collected or published by the Association was used as far as possible in responding to these requests. Publications supplied by the Government Bureau and the affiliated societies were also drawn upon largely. When direct or specific information could not be furnished every effort was made to put the inquirer in touch with authoritative sources of information.

As indicative of the general trend of thought and activity there is much that is significant in the reports that have been sent to the office by the affiliated societies for this meeting. Some of the points that are brought out most strikingly are

The extent to which the infant welfare work is being done among foreign-born mothers

The rapid development of prenatal care and its effect in creating a demand for trained obstetrical care

The growing interest in institutional mortality and the increased appreciation of the fact that it is a community problem which can not be evaded

The awakening interest in the study of respiratory diseases and in this connection the coupling up of the work of the infant welfare associations with some of the anti-tuberculosis associations.

The need for uniform statistical methods of recording the work and results of infant welfare associations. Much of this material loses some of its value because it is impossible to compare the records of the various societies. In many cases it is obvious that the different reports do not "speak the same language." Closely associated with the lack of uniformity in the records of local organizations is the more serious lack of uniformity in the vital statistics obtainable from the local departments of health—notably statistics of births, stillbirths, and estimated infant death rates.

RECEIPTS AND EXPENDITURES

The total income to date from all sources since November 16, 1914, has amounted to \$5,770.54; balance on hand at the beginning of the year \$5.88, making total for the year \$5,776.42. Of this amount \$3,817.94 came from membership dues and \$1,565.39 from contributions.

The total expenditures for all purposes amounted to \$5,410.20; leaving a balance on hand of \$366.22. The itemized account of the finances is to be found in the treasurer's report on page 26.

TRAVELING EXHIBIT

The Traveling Exhibit has been shown in the following places during the year:

December, 1914—Orange, Mass., Parent-Teacher Assn.
January and February, 1915—Springfield, Mo., Public Welfare Assn.
March—Crosset Hospital, Crosset, Arkansas
May—Baltimore, Md., National Conference of Charities and Correction
June—Bureau of Child Welfare, Dept. of Public Health, Pittsburgh, Pa.
August—Galesburg, Ill., District Fair Assn.
September—West Chester, Pa., County Fair
October—Dayton, Ohio., Dept. of Health
November—Philadelphia

The rentals that have accrued from the exhibit during the year have amounted to \$119.41. Photographs of the exhibit have been kept in constant circulation and have served in a number of places as the basis for local exhibits,—including the Pittsburgh Baby Week; Babies' Hospital of Hartford; Wilkes-Barre Visiting Nurse Assn.; Holyoke Infant Welfare Society; Clarksburg Visiting Nurse Association; Hot Springs, Va., Infant Welfare Society; Dallas, Texas, Child Welfare Association; Omaha, Neb., Child Welfare Society; Louisiana State Board of Health; Child Welfare Organization, Superior, Wis.; Board of Health, Dayton, Ohio; State Board of Health, Boston; Child Welfare Organizations in Ashbury Park, Delaware, Minneapolis and Reading, Pa.

TRANSACTIONS

The Transactions of the Fifth Annual Meeting held in Boston, November 12-14, 1914, were published in March, 1915. Fourteen hundred copies were printed at a total cost of \$814.66, with \$134.47 additional for distribution.

MEMBERSHIP

The total number of paid up memberships for the year ending November 15, 1915, was 806, with 163 additional advance payments for 1916. The distribution of the membership is indicated in the accompanying statements.

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY

MEMBERSHIP

	Life Members 1910-1914	Paid in Advance for 1915	Paid during 1915		Advance for 1916	
			Arrears for 1914	Current	Old Members	New Members
Alabama	2	..	..
California	1	1	22	..	1
Colorado	5	..	..
Connecticut	1	..	20	1	1
Delaware	1
District of Columbia..	..	3	..	24	1	4
Florida	2	..	..
Georgia	3	..	..
Illinois	2	..	48	4	2
Indiana	5	..	..
Iowa	4	..	1
Kansas	5	1	..
Kentucky	1	1	9	1	1
Louisiana	1	..	4	..	..
Maine	7	1	..
Maryland	5	6	1	74	..	..
Massachusetts	57	..	48	5	4
Michigan	1	2	..	28	2	1
Minnesota	1	1	..	21	..	..
Missouri	1	1	..	17	..	1
Montana	2	..	..
Nebraska	1	..	..
Nevada	1	..	..
New Hampshire	2	..	4	..	..
New Jersey	25	3	7
New York	1	7	..	102	3	30
North Carolina	1	..	..
North Dakota	2	..	..
Ohio	5	4	..	67	1	2
Oregon	1	..	..
Pennsylvania	1	6	..	78	10	61
Rhode Island	1	..	10	..	2
South Carolina	2	..	..
South Dakota	1	..	..
Tennessee	1	..	..
Texas	3	..	2
Utah	4	..	..
Vermont	2	..	..
Virginia	1	..	7	..	..
West Virginia	1	..	..
Wisconsin	1	..	9	..	3
Canada	10	1	1
England	2	1	1
New Zealand	2	1	..
Hawaii	1	..	..
Panama	1	..	..	..	..
Philippine Islands	3	..	..
China	2	..	1
Totals.....	15	99	3	692	36	127
				99		
				15		

806 Total 1915 Membership

1915—Total Membership		1916—Advance Payments	
<i>Paid in advance</i>			
Sustaining Members	1	Contributing Members	8
Contributing Members	3	Affiliated Societies	13
Affiliated Societies	7	Active Members	142
Active Members	88		<hr/>
			163
Life Members—1910-1914.....	99		
	15		
Life Members—joined in 1915..	2		
Sustaining Members	11		
Contributing Members	38		
Affiliated Societies	105		
Active Members	536		
	<hr/>		
	692		
	806		

It is always difficult to sum up the year's work of the office in an annual report. Some idea of the extent of the correspondence can be gathered from the itemized statement which accompanies this. It may be of interest to some of the members of the Association to know that we have handled over 18,000 pieces of mail.

CORRESPONDENCE

November 16, 1914—November 15, 1915

Total pieces of mail sent out.....		18,329
Personal letters	2,241	
Circular letters	1,641	
Membership letters	508	
Follow-up Work	3,903	
Bills and receipts (sealed but without letter).....	904	
Second-class matter—general, including packages and programs.....	8,050	
Circulars to members re Boston Transactions.....	970	
Postals to Affiliated Societies.....	112	
Booklets	7,018	
Educational leaflets	3,597	
Obstetrical leaflets	2,828	
Motherhood circular	3,022	
Circular 1/15/14/	5,765	
Circular 2/2/12/	588	
Preliminary programs	9,348	
Final programs	2,221	
Executive Secretary's reports	56	
Reply envelopes	8,613	
If not a member.....	8,905	
Pledge cards	948	

Respectfully submitted,

GERTRUDE B. KNIPP,
Executive Secretary

REPORT OF THE TREASURER

STATEMENT

November 16, 1914, to November 15, 1915

Balance on hand November 16, 1914.....		\$	5.88
Receipts :—			
Membership			
Active	\$2,092.94		
Affiliated	590.00		
Contributing	460.00		
Sustaining	275.00		
Life	400.00	\$3,817.94	
Contributions :—			
General	\$ 147.00		
Guaranty	250.00		
Committee on Obstetrics	3.00		
Toward Postage	1.90		
Toward rent of office	100.00		
From Boston Local Committee, toward expense of Boston Meeting and printing and distribut- ing Transactions, 1914 meeting.....	1,064.39	1,565.39	
Exhibit (Rentals for use of Traveling Exhibit)		119.41	
Transactions (Sale of printed copies) 1910, 1911, 1912 and 1913.....	\$ 44.96		
1914	164.53	209.49	
Received from Journal of the American Medical Association (For report of Boston Meeting).....		11.00	
Received from sale of reprints.....		4.20	
Received from sale of "Motherhood" leaflets.....		7.50	
Interest on bank balances.....		35.61	5,770.54
			<u>\$5,776.42</u>
Disbursements :—			
Salaries	\$2,516.59		
Rent of office.....	200.00		
Printing (General)	469.85		
Transactions of Boston Meeting :—			
Printing 1,400 copies	\$ 814.66		
Distribution—Postage	99.59		
Expressage	7.40		
Wrapping	27.48	949.13	
Postage		344.43	
Office Supplies		84.97	
Clerical Help		358.90	
Telephone		27.18	
Exhibit (Repairs and other expenses).....		230.74	
Traveling Expenses		40.25	
Multigraphing and Typewriting.....		33.82	
Expressage and Telegrams.....		16.44	
Miscellaneous (janitor service, water, ice, carfare, etc.)....		37.59	
Advertising in Survey, clipping service and insurance.....		100.31	5,410.20
Balance on hand November 15, 1915.....		\$	366.22

Respectfully submitted,

AUSTIN McLANAHAN, Treasurer.

American Association for Study and Prevention of Infant Mortality.
Baltimore, Md.:

GENTLEMEN :—

In compliance with the request of your Executive Committee, we have made an audit of the accounts of the American Association for Study and Prevention of Infant Mortality for the year ending November 15, 1915, and find them correct.

Very truly yours,

ALEXANDER BROWN AND SONS

GENERAL SESSION

Thursday night, November 11, 1915

Chairman, The HON. RUDOLPH BLANKENBURG, Mayor of Philadelphia

ADDRESS BY MAYOR BLANKENBURG

MR. CHAIRMAN, LADIES AND GENTLEMEN :

Nothing should appeal to us more than the taking care of innocent, helpless babies, who are at the mercy of the world if they are not properly looked after.

A single occurrence in our lives may, and very often does, dictate our future course. When I was a boy, about ten years of age, an accident happened one day near my father's home. A farmer's hand got too near the horse's hoof; he was struck in the head and lay insensible on the highway. There was no doctor within seven or eight miles, and we were at a loss to help him. Naturally, the first impulse was to send for help to his employer, a farmer who lived about a mile distant. My father asked me to go and see this farmer and have him send a vehicle as quickly as possible to take the man home, put him to bed and send for a physician. I ran as quickly as my little legs would carry me and arrived almost breathless at the farm. The farmer's wife, after she had heard my story, appeared to be quite indifferent to the fate of the man, for she said, "Well, we cannot do anything until we have put the sheep in the stables; that is more important; they must be looked after first."

The impression made upon me by this incident has never left me, for there I learned that the lives and comfort of animals were considered superior to the welfare and life of human beings. This incident has never been forgotten.

For this reason, I have, for years, been deeply interested in the welfare of innocent babies and children who, without the care and supervision of their elders, would be in worse condition than horses, cattle or other animals.

The efforts made during the last decade or more to establish societies for all the purposes such as the one that has brought us here

tonight may be properly traced to the foundation of societies for organizing charities. They gave the impulse to the many associations that have since been formed. It has always been a great satisfaction to me to have been instrumental in the establishment of such a society in Philadelphia. In 1878, seven Philadelphians, of whom only three are now surviving, spoke almost daily and nightly for six months or more, at meetings in churches, halls and private homes to interest good men and good women in the formation of the society. What it has done, and its offsprings, is a matter of history. The secretaries of this society worked so efficiently and did so much good that they attracted the attention of our neighboring city of New York, with the consequence that after Philadelphia gave them thorough training, New York came along and took them from us. We are not at all jealous of New York and are always glad to lend that metropolis a helping hand.

Let me refer to the first secretary of the Philadelphia Society—Charles D. Kellogg. He served here many years, then transferred his activities to New York. The same may be said of Homer Folks, the speaker of the evening; of Miss Richmond, Edward T. Devine and Porter Lee. We have also given New York Alexander M. Wilson, the efficient assistant director of the Department of Health and Charities. But I warn you people of New York here and now, don't you dare ever to make an effort to induce Dr. Joseph S. Neff to leave Philadelphia and transfer his great abilities and activities to your city. We shall not submit to it and I declare war on you now if you should ever attempt it. Dr. Neff has been instrumental in calling into life many of the activities in the baby-saving efforts made in Philadelphia, and we cannot and will not spare him.

One of the difficulties that has beset us in all our efforts to take care of the babies of the poor, the indigent and others has been the old, old complaint of politics in everything in municipal affairs, even in charity. I have tried my best to eliminate politics absolutely from the city administration and to carry on the work of the municipality like that of a great corporation; in fact, a corporation like the City of Philadelphia is far greater and more important than even the great corporation called the Pennsylvania Railroad. What would become of that corporation if its officials were selected on account of their political faith or their affiliation with political bosses? The Company

would be in the hands of a receiver before many moons. And so would nearly any municipality if it were not for the fact that taxes and other sources of income are annually levied for municipal purposes and they generally are appropriated in such a way that, with the help of temporary loans, they suffice to carry on the government.

Over in West Philadelphia, the Philadelphia Hospital is a burning example of political misrule. The people voted a million dollars a year ago or more to erect additional buildings. The administration has been ready to commence this work for months past, but the politicians did not want the administration to have the credit of starting this important movement, so the money was not appropriated by Councils and the poor aged and infirm women are suffering today for want of the plainest and urgently needed accommodations. That, of course, matters not with politicians and political bosses. They are interested only in the perpetuation of their power by any and all means at their command.

Even fresh air piers have been neglected by the men who command our city legislature. No appropriation was made last year to give mothers and their babies the opportunity of occupying the pier on the Delaware River and thus get protection from the hot rays of the sun. It is shameful to have to confess this in a community that calls itself civilized, but only plain talk will ever change such conditions.

A housing and sanitation act was passed by the legislature nearly three years ago. We immediately tried to put that act into effect, asked for an appropriation of Councils, but were met with a cold stare and nothing was done. This was largely owing to the fact that the politicians wanted to fill the larger number of positions to be created under this act. Nothing was done until the last legislature re-enacted the bill and the Governor signed the act with the distinct understanding that the necessary appropriation should be forthcoming at once. There was not enough money appropriated to give real effect to the law and relieve the situation of overcrowding, insanitary conditions, all owing again to the fact that we would not submit to have the places filled as political rewards and not on account of the ability of the appointees. This has been, as stated before, one of the great drawbacks in bringing about improved conditions, but as I have been an optimist all my life, I do not despair, no matter what opposition—the right must and will triumph in the end!

In this special work in which you ladies and gentlemen are engaged we should, in appealing for support among the general public, make one of the strongest points and arguments the simple statement, "The poor woman's baby is as precious to her as those of the opulent, the wealthy and the well-to-do are to them, and often even more so."

There is one trait in human nature when it comes to our own kith and kin, and that is love and devotion. Let us help those who love their children and are not able to provide for them as they should. Let us aid every mother whose child may need fresh air, pure food, warm clothes, not only by giving them of our substance. but, what is even more—much more—give to them of ourselves. The spirit and dedication of one's self to a good cause is of greater moment even than financial or material assistance.

But, Ladies and Gentlemen, I did not come here to make a speech. My friend, Dr. Neff, asked me to take ten or fifteen minutes in extending to you a welcome. This welcome is extended most heartily on behalf of the City of Brotherly Love. May your work grow and become more efficient, more valuable, from day to day, until its effects will show a greater, a better, a stronger and a more healthy citizenship all over our beloved land.

I now take great pleasure in presenting to you Mr. Homer Folks, formerly of Philadelphia, now of New York.

ARE BABIES WORTH SAVING?

Infant Welfare Work: Its Purposes, Opportunities, and Agencies

ADDRESS BY THE PRESIDENT

HOMER FOLKS, LL.D., New York

A layman naturally cannot expect to contribute to the technical side of the prevention of infant mortality. It has seemed to me that the only contribution I might hope to make to this session would be to attempt to interpret some phases of our work to the general public. Being one of that general public, I may perhaps sense some of their difficulties more clearly than our professional members. I shall consider, from the layman's point of view, (1) What are the underlying purposes of infant welfare work, (2) How large an opportunity have we before us, and (3) What are the agencies on which we must chiefly rely?

The outstanding fact as to the underlying purpose of the infant mortality movement is that our work is *preventive* rather than *remedial*. At the outset we were thinking of sick babies and of curing them; then we were purifying the milk supply to keep them from getting ill; then we were encouraging maternal nursing as the all-important factor, and finally we are looking to prenatal education as leading the way to all the subsequent necessary steps. We have passed through the same history in many other lines of health work, only here we have passed through it very much more quickly. We had hospitals and dispensaries for the care of the sick long before we had health departments to prevent sickness. The hospitals and dispensaries dealt with the few; the health departments deal with the multitude; so, in a very few years the infant welfare movement has changed from dealing with the few for curative purposes, to deal with the multitude for preventive purposes.

The effort we are making is not simply to prevent mortality;

it is to prevent vast areas of sickness and misfortune which in some cases would have led to mortality and which in a vastly larger number of cases would have led to diminished vitality or incomplete development. We have spoken chiefly of mortality, because mortality happens to be measurable and recorded; sickness is not recorded and not likely to be in the near future. Vigor and efficiency are neither recorded nor susceptible of accurate measurement. Because the mortality rate is the only readily available index of infant welfare, we often speak of it and think of it as though it defined our whole purpose instead of being, as it is, one incidental result of a movement directed to very much larger, more comprehensive, and more significant results. This again is true of all public health movements, for the prevention of tuberculosis, of the diseases of middle life, and of old age. The readily available measure of success is the death rate, but in all movements we are aiming at one and the same object, to increase the vigor, efficiency, and happiness of one and the same tough and sinful human race—those people to whom Mark Twain was accustomed to refer in his later years as “this damned human race.” Our name perhaps might properly be the American Association for the Study and Promotion of Human Welfare through Better Care of Babies.

The important fact that infant welfare work deals with the multitude, and for prevention, appears to be overlooked by that minority of scientific opinion which expresses somewhat categorically the fear that after all what we are doing is not socially useful. The proceedings of our own section on eugenics voice more than one misgiving, lest in interfering with the elimination of the unfit, we are heaping up for ourselves worse evils for the future. The relative importance of heredity, as distinguished from other factors in human development, has been enormously emphasized in the last few years. In the judgment of biologists, many extremely interesting and probably very significant things have been discovered recently as to heredity, which as yet are known only to the few. As these filter down into popular information we must expect,

I think, such misgivings to be shared by a much larger number of people.

These adverse views, however, seem to me to be based on an earlier and erroneous conception of what infant welfare work is, of what infant welfare workers are *actually doing* from day to day. They are thinking of the early stages of our work, of curing sick babies. If this were all there were of it, it might be a case of our instinctive sense of what is right and desirable, triumphing over the present trend of scientific opinion. The question at issue is entirely changed, however when we recognize that the infant welfare movement aims not simply at the reduction of mortality, but at *constructively raising the standards*, in all matters affecting infant welfare. We are not fostering the *unfit*, whoever they may be, relatively *fit* or at the expense of, the *fit*, whoever they may be. We are seeking to lift certain great handicaps which have weighed down upon all child life. The same factors which force a certain number of babies below the level at which existence is possible, at the same time force vastly larger numbers of babies close to the margin. They may keep a slight balance on the credit side of the account, but are obliged to begin life practically bankrupt in vitality and energy, and with marks and scars which may be permanent. Increasingly, it becomes evident that the events and influences of very early life may have a profound effect upon bodily and mental development, upon the vigor and efficiency of the individual in later years. We are told that in experimental biology, by environmental changes of temperature, etc., extreme modifications in the developing individual may be brought about, and that these changes are predictable; that the young of certain kinds may be made at will to develop one eye instead of two, or the entire body to be developed inside out. It seems altogether likely that as yet we have but a glimpse of the extent to which damage done during infancy by disease, the effects of which may seem to have disappeared, may actually produce slight but cumulative effects, which become evident very much later in life, and which were hitherto supposed to have had their origin in later

life. When we seem to have recovered from, and as we say, "outgrown" infantile ailments, perhaps we *seem* to have done so, only because our instruments of measurement are very clumsy and inaccurate. Who can estimate therefore the significance to the human race, of a large reduction in the volume of those diseases and evils which produce illness among multitudes of babies and bring death to some.

It is a commonplace that complete *birth registration* is a first essential to the infant welfare movement. We have to know where all the babies are before our plans can be carried out. Another incidental proof that we are dealing with the many, not the few; with preventive, not remedial measures.

Again, it has become a commonplace that our work is eighty or ninety per cent *educational*. Obviously then it is not for the benefit of the most needy, and presumably less socially useful, elements of the community. Those who already *have some training* and are intelligent, *are those* who will profit most by it. *Those who know, know how to learn.*

From every point of view, therefore, infant welfare work cannot be regarded as simply preserving the unfit, but as raising the level at which the struggle for existence occurs. It is on exactly the same footing as every other advance in preventive medicine. If this is a mistake, then Jenner should be censured for discovering vaccination; Reed and his associates regarded as misguided enthusiasts; tuberculosis should be promoted instead of prevented; quarantine stations abolished and diseases imported rather than excluded; and the medical profession suppressed as enemies of public well being.

Being satisfied then that our work is not simply a concession to humanitarian instincts, but is socially useful and of vital significance to human welfare, we may next ask how large a job is it; what is the margin of preventable illness among infants; is our work to be readily accomplished or does it require slowly moving forces through one or more generations; are the expenditures prohibitive in amount; are the administrative difficulties serious. From all these points of view the facts are extremely encouraging. Nothing stands out

more clearly in the history of the last decade or two than that a very large amount of infantile illness and mortality is preventable, and that it can be prevented very speedily, at moderate cost, and with relatively little effort. Undoubtedly a substantial residuum of infant mortality is tied up with social conditions which can be changed but slowly, but as compared with some other large public health movements, such as the prevention of tuberculosis, the substantial reduction of infant mortality is simplicity itself.

Whether we look to large aggregations of population or to small areas, whether to big cities or small cities or rural districts, the fact is indisputable that even a moderate effort wisely directed brings large and immediate returns in infant welfare, reflected unmistakably and at once in the infant death rate.

For instance, the death rate of infants under one year of age per one thousand births in England and Wales as a whole, shows the following changes:

In 1904 it was 145 per 1000

In 1906 it was 132 per 1000

In 1908 it was 120 per 1000

In 1910 it was 105 per 1000

a reduction of $27 \frac{6}{10}$ per cent.

The statistics as to infant mortality in the larger cities of the United States are very interestingly set forth by Dr. Joseph S. Neff, the very efficient chairman of our local committee, to whom we are indebted for the exceptionally efficient arrangements for this meeting, in the October number of the American Journal of Public Health. In fact, the fall in the infant death rate which follows upon any reasonably efficient infant welfare work is so rapid as to be almost startling. We can to some extent visualize the lives saved in those localities. We cannot visualize so readily the enormously greater volume of healthy childhood leading to vigorous and efficient manhood, of which the reduction in mortality is but an index.

The object to which this association has addressed itself is

evidently one of the most important of the many varied aims of organized social betterment.

The beneficent results of infant welfare work are not only sure and swift; they are surprisingly inexpensive. Elaborate institutions are not required. We do not have to wait for the slow process of securing large appropriations, acquiring sites, and planning and constructing buildings; we need chiefly plenty of paper and printer's ink, and plenty of trained nurses. I am indebted to one of my associates for the suggestion that printer's ink, rightly and continuously applied, will save many babies. An infant welfare exhibition can be had in May, an infant welfare station put into operation in June, and whole areas of sickness prevented and many lives saved the first summer. In fact there is no other way of reducing the general death rate so quickly, so surely, and so cheaply. Babies saving is the bargain counter of philanthropy. Our publications would stand the most rigid tests of guaranteed advertising. The most hardened tax payer could be told in advance that he could have his money back if he were not satisfied with the results. The most anti-social real estate organization can be taken into camp. Infant welfare work is the great opportunity we have at the moment to do something which everybody must believe in.

Just how much we can do is uncertain, for many reasons. One of these is, that we do not know how much there is to be done. What a shocking thing it is that nobody can make more than an approximate statement of the number of infant deaths in the United States, and that nobody can make more than the wildest guess as to the number of births. How long will we, as public health workers and social workers be contented to bring up in the rear of the procession of the civilized nations in the matter of vital statistics?

In the absence of facts, however, we can guess, on the basis of the facts which other nations have painstakingly collected. On page 12 of a report on infant mortality in Montclair, New Jersey, recently issued by the Children's Bureau, is given a table of deaths of infants under one year of age per one thous-

and live births in foreign countries for the last year for which statistics are available. Incidentally, what a comfort it is, not only to have a Federal Children's Bureau, but to have one whose statements and publications can be taken absolutely at their face value. It would never occur to any trained public health or social worker to question anything which the Federal Children's Bureau, under its present management, may put forth. From this table it appears that among countries having high infant mortality rates, are the following:

Chili	332 per 1000
Russia	248 per 1000
Ceylon	215 per 1000
Jamaica	193 per 1000
German Emp.	192 per 1000
Roumania ...	186 per 1000

Beginning now at the bottom with the most favored nation and reading upwards, we find:

New Zealand .	51 per 1000
Norway	65 per 1000
Sweden	72 per 1000
Australia	72 per 1000

A year or two ago, we had in the United States, so to speak, an embryo registration area, containing the New England States, Pennsylvania and Michigan, and certain cities, for which the estimated infant mortality rate for 1910 (estimated by the Census Bureau) was 124. This estimate if it were correct and if it represented conditions throughout the country—which it probably does not—although nobody knows, would put us just above Switzerland with a rate of 123 and next below Servia with a rate of 146.

An account of the New Zealand work in reducing infant mortality so that in this respect it stands ahead of all other countries (given in a leaflet published by the Children's Bureau) is fascinating. New Zealand has a population of about 1,000,000 people; it has several cities, one of 60,000 in population (including suburban areas). Conditions are undoubtedly favorable in various ways in a new country, but it is a striking fact

that New Zealand has *reduced* its infant mortality from 83 per 1000 in 1902 to 51 per 1000 in 1912, and that one of its larger cities during the same period of time has reduced its infant mortality from 89 per 1000 in 1902 (then considered a very low figure) to 38 per 1000 in 1912. The factors by which these astonishing reductions have been brought about appear to be chiefly public education by printer's ink and trained nurses. When one reads the details of what was done in New Zealand there seems to be really no reason whatever for thinking that a similar result, relatively speaking, cannot be had in any part of the United States. If a guess is to be made, that of the New York State Health Department is as good as any—it guesses that there are about 300,000 infant deaths in the United States per annum, of which it guesses one-half—or 150,000 are preventable by means now practicable.

If infant welfare work is socially useful beyond doubt, and if it is also perfectly practicable, we may ask what are some of the chief agencies by which infant welfare may be promoted in this country at this time.

If we look over the country, or if we listen to and study the reports of our affiliated agencies, it is clear that at the present moment the bulk of the infant welfare work in most localities is being done by private initiative, with or without city aid; that a few city health departments have taken up the work actively; that there is a well defined tendency to transfer the work from private to public responsibility; and that public action tends to be more comprehensive and in the long run more effective. It seems to me clear that the job is a public one. If it is to be based on birth registration, if it is to be comprehensively educational, then it should have the prestige of public support and direction. Under exceptional conditions it may be necessary to continue the work indefinitely as a private undertaking. In most localities it will probably be done that way at first, but generally speaking, the function of private organizations in the future will be that of stimulating, supporting, and, when needful, constructively criticizing the work of public authorities. These public authorities

will, in the main, be *local* authorities, municipal, county, village or town. Public health generally, is certainly a public function, and infant welfare is an integral, almost inseparable part of the public health problem.

How are these multitudinous local authorities to be made active? How is the latent voluntary interest to be organized and directed? Is it not clear that for this purpose there must be some *state-wide activity*? The state is the unit of legislation. The state is the unit, in many important respects, of administration. The state health authorities it seems to me are clearly indicated as the agency for promoting local infant welfare work.

May I refer to one instance in which this has been worked out? In the revision of the New York public health law in 1913 it happened to be conveniently possible to insert a provision calling for a Division of Child Hygiene in the New York State Health Department. This Division was organized in 1914. A very active effort has been made by this Division, directly to promote the establishment of infant welfare stations throughout the state. It is, I think, a rather unusual thing for the state itself to act thus openly, squarely, and widely, as a promoting agency. Exhibits, public meetings, newspaper publicity, motion pictures, exhibits at county and state fairs, in fact all the machinery with which we have become familiar in the tuberculosis campaign, has been operated with great vigor and effect by the state itself, with the direct object of securing the effective organization of infant welfare, either by private initiative, or by local public health authorities.

Results: In 1913 32 infant welfare stations

In 1914 67 infant welfare stations

In 1915 74 infant welfare stations

and all this is outside the great city of New York. The infant death rate outside of New York City in New York state shows the following for the first seven months of each of the last three years:

1913—First 7 months, 111

1914—First 7 months, 102

1915—First 7 months, 98

A more perfect birth registration secured under another new division of this department, directed by Dr. Cressy L. Wilbur, probably contributes to this apparent reduction, but that there has been real progress is shown by the reduction in the actual number of deaths, and also by the lower percentage of infant deaths to the total number of deaths.

The total cost of this promoting work is some \$17,000 per year. It undoubtedly secures the application by local philanthropy and by local authorities, of many times this amount to the cause of infant welfare. It may be ten times as difficult to secure the establishment of a division of child hygiene in a state health department as it is to establish an infant welfare station in some particular city, but it is fifty times as important to do so.

Not only is the division of child hygiene in the state health department necessary for promoting purposes, it is equally essential for subsequent supervision and leadership. While we need free experimentation, we also greatly need a powerful influence making for standardization, coordination, and some degree of uniformity. It is not necessary that each locality should work out the details painfully and at large cost of means, and perchance too of lives. Such a state division should make the experience of each locality the common property of all.

Any state health department doing real work is not likely to find its course one of plain sailing; it will have its times of storm and of stress. It will need support, wide-spread, active, —belligerent even. It may even need constructive criticism. For all these reasons it is very important that there should be, parallel with the state, official, child hygiene division, a state-wide voluntary organization, either devoted directly to infant welfare, or including the general subject of public health in the range of its interests. Such a voluntary state-wide organization is a form of accident and sickness insurance for the official department.

But how are these state child hygiene divisions and these state-wide voluntary organizations to be secured?

How is this desirable state legislation to be had, and these necessary state appropriations?

Dealing with this subject on a nation-wide basis there are two factors. First: There is the Federal Children's Bureau so efficiently organized and directed by Miss Lathrop. Our cause is under a tremendous obligation to this Bureau for putting into concise and statistical form that which before was known but vaguely, or not at all. One of its chief functions we trust will continue to be that of appropriately and adequately shocking the community from time to time by the further presentation of facts. Presumably it will not depart from the rule of other Federal Bureaus, and actively promote state action by sending representatives to confer with and urge the cause upon the various state authorities. I am inclined to wish that it were the custom for federal authorities to act directly as promoters of uniform legislation on matters of social betterment. Otherwise this subject of uniform state action seems to almost vanish in the dim and uncertain future. It is one of the almost unsoluble problems of our federal form of government. However this nation-wide propagandea may be carried on by private philanthropy as well as by official action. This is where we come in. This is very distinctively a field which this national Association might well occupy. We have contributed to nation-wide interest and action largely, very largely, considering our budget of only \$5,500 per year. What a splendid thing it would be if we could do a great deal more, if we could send highly trained, skillful, social politicians into every state in the Union in which the legislature is to meet this coming winter, to confer in advance with the Governor and with the leading members of the legislatures, to ask them to consider proposing adequate birth registration and child hygiene, and if they proved to be slow of hearing to start a ground-swell of popular interest in the subject in these states. What a fine thing it would be if we could assist them in the framing of legislation, adapted to existing situations and local conditions, and if we could appear at legislative chambers before committees in behalf of such bills—in short.

if we could do in our field what the National Child Labor Committee attempts to do in its field, only still more adequately. The National Child Labor Committee is already expending some \$70,000 per year in promoting uniform child labor legislation. To do the work I have outlined, this Association would need only a trifling sum of say \$100,000 per year for the first few years; we might need more later. An endowment of \$2,000,000 would enable us on its income to live up to our present opportunities. May we not hope that from some source it may be forthcoming, for we may as well face the fact that there is no other way of doing it. Such results as we are after cannot be had for nothing—they cost money and plenty of it. Who will be the first to come forward and thrust upon us this modest contribution?

It is a striking fact that while the great war has set back the hands of the clock in many lines of social work, it has at the same time focused attention upon the problem of infant welfare. In England we learn that more infant welfare centres have been established since the war broke out than ever before in the same length of time—that they were formed at the rate of four or five per week. This of course was due to the sudden realization of the vital significance of infant welfare. May we not hope that without having to undergo the trial by fire of war we may profit by the same lessons; that we may secure a nation-wide recognition of the fact that infant welfare is a vital factor in national welfare. We are all talking and thinking about preparedness. Let us not forget that no other form of preparedness is more vital than the conservation of human lives, on whom in the last analysis must depend the safety of the nation, from foes within as well as from foes without.

SESSION ON PEDIATRICS

Wednesday, November 10, 1915, 9.30–11.30 a. m.

COMMITTEE

Chairman, DR. CHARLES A. FIFE, Philadelphia
DR. OGDEN W. EDWARDS, Jr., Pittsburgh
DR. H. J. GERSTENBERGER, Cleveland
DR. S. McCLINTOCK HAMILL, Philadelphia
DR. R. S. HAYNES, New York City
DR. JOHN HOWLAND, Baltimore
DR. HENRY D. JUMP, Philadelphia
DR. RICHARD SMITH Boston
DR. PHILIP VAN INGEN, New York City
DR. BORDEN S. VEEDER, St. Louis
DR. HERBERT B. WILCOX, New York City

STATEMENT BY THE CHAIRMAN:

Although there has been such an encouraging and gratifying reduction of infant mortality in the last few years, there has been, unfortunately, but a very slight reduction or hardly any reduction at all in the death rate due to respiratory diseases, although these diseases are responsible for such a very large proportion of the infant death rate. Common colds and the sequellae are responsible for more destruction of infant life than all the quarantinable diseases put together. For this reason and many others that you will hear, the committee has chosen *The Treatment and Prevention of Respiratory Diseases* as the subject of our symposium today.

Our speakers—Dr. W. Woodward, whose paper will be on “*The Statistical Study of Respiratory Diseases as a Factor in the Causation of Infant Mortality*,” Dr. Royal Storrs Haynes, who will discuss the “*Prevention of Respiratory Diseases*,” and Dr. John Lovett Morse, who will have as his subject “*The Treatment of Respiratory Diseases with Special Reference to the Value of Fresh Air*”—will tell us how this Association and all interested in the reduction of infant mortality can approach this subject.

A STATISTICAL STUDY OF RESPIRATORY DISEASES AS A FACTOR IN THE CAUSATION OF INFANT MORTALITY

WM. C. WOODWARD, M. D., Washington, D. C.

This paper presents certain facts relative to the marshalling of the forces arrayed against the infant life of this country, with particular reference to the status and organization of one of the most powerful of those forces, diseases of the respiratory system. It is the result of a study to determine whether or not the diseases within the group named occupy such a position as to render it advisable that they be made the object of special attack.

For the purposes of this paper, the phrase "diseases of the respiratory system" is used in the technical sense in which it is employed in the International List of Causes of Death. Just what the phrase means, and the relative importance of the several units that enter into it, are stated later in this paper. Statistical methods have had to adapt themselves to available data, and the absence of adequate information concerning populations and births has prevented a more exhaustive statistical study. Limitations of time, too, have had an influence in the same direction and have rendered it necessary to confine the present study to the mortality statistics of the United States, for the calendar year 1913, as presented in the Fourth Annual Report, Bureau of the Census, Department of Commerce.

Distribution of deaths in the first year of life, according to the International List of Causes of Death. Within the registration area of the United States, there occurred in the calendar year 1913, 159,435 deaths during the first year of life. Their distribution among the several groups established by the International List of Causes of Death is shown in Table 1, printed below. Arranged in order of relative importance, premature births, congenital debility, and other conditions peculiar to early infancy, stand first, having caused 52,865 deaths; diseases of the digestive system come next, with 43,243; diseases of the respiratory system are third, being responsible for 25,274; and general diseases follow with 15,116. The remaining deaths, 22,937 in all, were due to the following causes, arranged in order of relative im-

portance, malformations, diseases of the nervous system and organs of special sense, ill-defined causes, external causes, diseases of the circulatory system, non-venereal diseases of the genito-urinary system and annexa, diseases of the skin and cellular tissues, and diseases of the bones and organs of locomotion. Expressed in terms of percentage, computed upon the basis of the total number of infant deaths, the conditions peculiar to early infancy caused 33.16 per cent; diseases of the digestive system, 27.12; diseases of the respiratory system, 15.85; general diseases, 9.48; and all other diseases, and all malformations and injuries, 14.39.

TABLE 1. Deaths from all causes, during the first year of life, in the Registration Area of the United States, in the calendar year 1913: Showing the relative influence of each of the several disease groups recognized in the International List of Causes of Death.

Cause of Death	Number of Deaths	Percentage of Deaths *
All Causes	159,435	
I. General Diseases	15,116	9.48
II. Diseases of the Nervous System and Organs of Special Sense	6,047	3.79
III. Diseases of the Circulatory System.....	1,315	0.82
IV. Diseases of the Respiratory System.....	25,274	15.85
V. Diseases of the Digestive System.....	43,243	27.12
VI. Non-venereal Diseases of the Genito-urinary System and Annexa.....	877	0.55
VII. The Puerperal State.....	.....	.....
VIII. Diseases of the Skin and of the Cellular Tissue	558	0.35
IX. Diseases of the Bones and of the Organs of Locomotion	143	0.09
X. Malformations	8,813	5.53
XI. Early infancy	52,865	33.16
XII. Old Age .....	.....	.....
XIII. External Causes	1,892	1.19
XIV. Ill-defined Causes	3,292	2.06

* This is the percentage in each class, computed on the basis of all deaths during the first year of life.

Manifestly, in the campaign for the protection of infancy, the most important lines of defense and attack are to be found in those places where the losses are heaviest, and, as has just been shown, these, named in order of relative weight, are to be found in the conditions peculiar to early infancy, the diseases of the digestive system, diseases of the respiratory system, and general diseases. Three of the groups named have already been very definitely attacked: Against the dangerous conditions peculiar to early infancy, propagandas for pre-natal nursing and the improvement of obstetric work by midwives

and physicians have been organized and maintained. Against diseases of the digestive system, there have been campaigns for the improvement of the milk supply, popular education concerning diet in infancy, and the establishment of milk stations. Against general diseases, too, campaigns have been organized, although these have related to infant life only incidentally; for this nosological group is made up largely of communicable diseases, including tuberculosis; cancer; alcoholism; and lead and other occupational poisonings, against all of which very definite organized movements are under way. But against diseases of the respiratory system no specific action has been taken, although the campaign for the improvement of housing conditions comes almost within that description. Clearly, if the circumstances have warranted the campaigns inaugurated against the other groups of diseases named—and the results obtained clearly demonstrate that they have—the present circumstances call for an organized campaign against diseases of the respiratory system.

Relation of diseases of the respiratory system in the first year of life to diseases of the respiratory system as affecting the entire community. It has been shown above that diseases of the respiratory system play an important part in the mortality of infants. It may be shown further, however, that the mortality from respiratory diseases in infancy plays an important part even in relation to the mortality at all age periods from the same causes. The total mortality from diseases of the respiratory system, at all ages, within the entire registration area, in the calendar year 1913, covered 103,979 deaths. Of these deaths, 25,274 occurred among infants in the first year of life. The mortality among infants in the first year of life represented, therefore, approximately one-quarter of the mortality at all ages. In other words, approximately 25 per cent of the entire mortality from diseases of the respiratory system within the registration area comes within the purview of those agencies working for the welfare of infants.

There are variations, of course, in the age distribution of deaths from the individual diseases affecting the respiratory system and going to make up the general group now under consideration. These variations, however, emphasize rather than diminish the importance of the relation of infancy to the occurrence of diseases of this type. Of the 32,615 deaths from lobar pneumonia, 9.67 per cent occurred among infants less than one year old. Of 31,094 deaths from broncho-pneu-

monia, 42.13 per cent occurred in the age group just named. Of 20,069 deaths from pneumonia undefined as to type, 21.76 per cent occurred in infancy; of 6,602 deaths from acute bronchitis, 55.51 per cent; and of 2,228 deaths from pulmonary congestion and pulmonary apoplexy, 21.23 per cent. Other percentages appear in Table 2, printed below. They all make clear the fact that a campaign against diseases of the respiratory system in infancy is an important part of any campaign against such diseases generally, and may well form its starting point.

Incidentally it may be remarked that the recognition of diseases of the respiratory system among infants as a distinct statistical group would be of material advantage for the purposes of the agencies seeking to promote the welfare of infants, inasmuch as it would call attention to the frequency of these diseases at that period of life and would serve as a guide to the degree of the success of any efforts made for their prevention. A precedent exists for the recognition of such a special combined disease-age group in the recognition already recorded by the International List of Causes of Death of "diarrhea and enteritis (under two years)" as a nosological entity distinct from "diarrhea and enteritis (two years and over)".

TABLE 2. Deaths from diseases of the respiratory system, in the Registration Area of the United States, in the calendar year 1913: Showing the influence of infancy on the total mortality from each disease in this group, and the influence of each such disease on the total infant mortality within the group.

Cause of Death	Deaths		Per cent. to corresponding deaths of all ages	Per cent. to all infant deaths from respiratory diseases
	At All Ages	Under 1 Year		
All Diseases of Respiratory System	103,979	25,274	14.31	.....
Diseases of the Nasal Fossae....	104	43	41.34	0.17
Diseases of the Larynx.....	835	191	22.87	0.75
Diseases of the Thyroid Body....	358	17	4.75	0.07
Acute Bronchitis	6,602	3,665	55.51	14.50
Chronic Bronchitis	4,786	69	1.44	0.27
Broncho-pneumonia	31,094	13,100	42.13	51.83
Lobar pneumonia	32,615	3,153	9.67	12.47
Pneumonia (undefined)	20,069	4,367	21.76	17.28
Pleurisy	2,211	108	4.88	0.43
Pulmonary Congestion and Pulmonary Apoplexy	2,228	473	21.23	1.87
Gangrene of the Lung.....	203	.....	.....	.....
Asthma	1,578	16	1.49	0.06
Pulmonary emphysema	170	5	2.94	0.02
Other Diseases of the Respiratory System (Tuberculosis excepted)	1,126	67	5.95	0.26

Relative fatality of the individual diseases in the general group, "Diseases of the Respiratory System." It has been deemed best thus far to adhere to the generally accepted group of diseases under the phrase, "Diseases of the Respiratory System," in order to eliminate so far as may be practicable errors of diagnosis. A death reported by one physician as due to chronic bronchitis may be reported by another as due to acute bronchitis, and by a third as due to pneumonia in one of its several recognized forms; but the chance of error in the determination merely whether death was or was not due to some disease of the respiratory system is much less. For purposes of prevention, however, it is necessary to look into the relative strength of the several units that go to make up the group. The table printed above contains the data necessary for this purpose. Of the 25,274 deaths from diseases of the respiratory system, in the first year of life, 13,100, or 51.83 per cent were due to broncho-pneumonia; 4,367, or 17.28 per cent were due to pneumonia, unclassified as to type; 3,665, or 14.50 per cent, to acute bronchitis; and 3,153, or 12.47 per cent, to lobar pneumonia. Of all deaths in this class, bronchitis and pneumonia together caused 96 per cent. It is manifest, therefore, that a campaign against deaths in infancy from diseases of the respiratory system is primarily and nearly altogether a campaign against bronchitis and pneumonia.

Geographic distribution of diseases of the respiratory system in infancy. Is the prevention of diseases of the respiratory system a sectional problem? Within the entire registration area of the United States, in the calendar year 1913, there occurred 159,435 deaths in the first year of life, and of these, 25,274, or 15.85 per cent were due to diseases of the respiratory system. Within the registration States alone, 15.67 per cent of all deaths in infancy were due to such diseases. In the absence of necessary figures relating to population and to births, however, no attempt has been made to determine the relative prevalence of diseases of this group in the individual States and cities within the registration area, or within the urban and suburban areas of such States. Yet it is not difficult to see that these diseases play everywhere an important part in causing infant mortality. The very lowest percentage of infant deaths charged in any jurisdiction to diseases of the respiratory system was 10.87, in Virginia. The highest percentage was 22.83, in New Haven, Connecticut, with New York

City a close second, with a percentage of 22.54. The percentages for cities were very generally, but not universally, higher than the percentages for the States in which those cities were located. *

The part that diseases of the respiratory system play in the causation of infant mortality in the entire registration area, in the registration States, in the individual States within that group, and in some of the more important registration cities, is shown in Table 3. If these figures do not show the extent to which diseases of the respiratory system prevail in various parts of the country, they do show that everywhere these diseases play a very important part in the destruction of infant life, and that wherever the prevention of infant mortality is a task worth undertaking at all, an attack directed specifically against diseases of the respiratory system affords a promising field for endeavor.

Age in its relation to deaths from bronchitis and pneumonia in the first year of life. An effective attack on diseases of the respiratory system, in infancy, requires a knowledge of the time of their occurrence in the life of the infant. If they occur in the earliest period of life, then pre-natal nursing and proper service at the time of delivery must be relied upon for their prevention; if they occur later in life, the pediatrician and the milk station must be the sources from which the necessary protection emanates; and if they occur throughout infancy, all these forces must be enlisted. Available figures, however, do not permit the distribution of all deaths in infancy from diseases of the respiratory system according to age periods. Such an age distribution can be made only of deaths due to bronchitis and pneumonia. But as the deaths caused by bronchitis and pneumonia comprise approximately ninety-six per cent of all deaths within the group, the result of their distribution according to age periods will yield results sufficient for present purposes.

The third week of life seems to represent the maximum of danger so far as death in infancy from bronchitis and pneumonia is concerned, the fatal illness probably beginning most frequently during that week or the week preceding. Of the 24,285 deaths from these diseases, within

* In view of the very common misinterpretation of figures of this character, it seems advisable to emphasize the fact that they do not show the degree to which diseases of the respiratory system prevail in the several places to which the figures relate. If the number of deaths due to diseases of the digestive system, or any group of diseases whatsoever, other than diseases of the respiratory system, be diminished, the percentage of deaths due to diseases of the respiratory system will be correspondingly increased.

TABLE 3. Deaths from diseases of the respiratory system during the first year of life, in the Registration Area of the United States, and in the States and certain cities within that area, in the calendar year 1913: Showing influence of respiratory diseases on the total infant mortality.

	Deaths from all causes under one year	Deaths from Respiratory Diseases under one year	
		Number	Percentage
Registration area	159,435	25,274	15.85
Registration States	145,605	22,880	15.67
Alabama			
Birmingham	425	54	12.70
California	4,354	636	14.61
San Francisco	632	112	17.72
Colorado	1,643	326	19.84
Denver	365	52	14.24
Connecticut	3,342	518	15.50
New Haven	381	87	22.83
District of Columbia	828	136	16.42
Georgia			
Atlanta	485	82	16.91
Illinois			
Chicago	6,939	1,417	20.42
Indiana	5,689	755	13.27
Indianapolis	518	64	12.36
Kentucky	5,582	640	11.46
Louisville	486	90	18.52
Louisiana			
New Orleans	934	192	20.55
Maine	1,734	241	13.90
Maryland	4,373	649	14.84
Baltimore	2,011	354	17.60
Massachusetts	9,971	1,648	16.52
Boston	2,107	372	17.65
Michigan	7,620	1,080	13.52
Detroit	2,332	388	16.64
Minnesota	4,092	532	13.00
Minneapolis	606	81	13.37
Missouri	7,077	1,109	15.67
St. Louis	1,478	232	15.70
Montana	812	141	17.36
Butte			
New Hampshire	1,322	182	13.77
Manchester			
New Jersey	7,571	1,352	17.86
Newark	1,009	176	17.44
New York	25,059	4,794	19.13
New York City	13,850	3,122	22.54
North Carolina	1,394	157	11.26
Charlotte			
Ohio	11,064	1,502	13.57
Cleveland	1,944	292	15.02
Pennsylvania	26,304	4,418	16.79
Philadelphia	4,618	786	17.02
Rhode Island	1,635	245	14.98
Providence	660	99	15.00
Tennessee			
Memphis	319	46	14.42
Nashville	255	45	17.64
Utah	916	149	16.27
Salt Lake City			
Vermont	729	101	13.85
Burlington			
Virginia	5,931	645	10.87
Richmond	507	83	16.37
Washington	1,566	229	14.62
Seattle	303	42	13.86
Wisconsin	4,997	697	13.95
Milwaukee	1,262	177	14.03

the registration area, 1,263, or 5.20 per cent, occurred during the third week; within the registration States alone, 5.17 per cent; and within the chief cities within the registration States, 4.79 per cent. By far the greatest percentage of deaths that occurred in any one month is recorded during the first month: For the entire registration area, 18.62 per cent; for the registration States, 18.41 per cent; and for the principal cities within the registration States, 16.80 per cent. During each statistical period after the first month, there is apparently a diminution in the monthly frequency of deaths from the diseases named, as is shown in Table 4; but this is to be accounted for in part by the diminution in the number of living infants as the twelve monthly periods pass. Everywhere, however, the prevention of bronchitis and pneumonia, and of diseases of the respiratory system generally, is a problem not limited to any one part of the first year of life, but covering the entire period. It is a problem alike for the prenatal nurse, the midwife, the obstetrician, the pediatrician, and the infant welfare station.

A STATISTICAL STUDY OF RESPIRATORY DISEASES

TABLE 4. Deaths from bronchitis and pneumonia during the first year of life within the Registration Area of the United States, in the calendar year 1913: Showing distribution according to monthly Age periods.

	Total	Less than 1 day	1 day	2 days	3 to 6 days	Less than 1 week	1 week	2 weeks	3 weeks but less than 1 month	Less than one month	1 month	2 months	3 to 5 months	6 to 8 months	9 to 11 months
Registration Area. Number of deaths	24,285	55	113	207	617	992	1,141	1,263	1,126	4,522	2,953	2,377	5,341	4,807	4,085
Percentage		0.23	0.47	0.85	2.54	4.08	4.71	5.20	4.64	18.62	12.16	9.79	22.81	19.79	16.82
Registration States	21,923	44	96	133	543	866	1,032	1,134	1,007	4,039	2,750	2,132	5,023	4,320	3,684
Number of deaths															
Percentage		0.20	0.44	0.83	2.48	3.95	4.71	5.17	4.59	18.41	12.45	9.72	22.91	19.70	16.80
Cities in Registration States	13,181	22	64	107	306	499	533	632	550	2,214	1,526	1,224	2,964	2,766	2,487
Number of deaths															
Percentage		0.17	0.49	0.81	2.32	3.79	4.04	4.79	4.17	16.80	11.57	9.29	22.49	20.98	18.87

CONCLUSIONS

1. In the registration area of the United States, in the calendar year 1913, diseases of the respiratory system caused 15.85 per cent of the total mortality in the first year of life. As a factor in infant mortality, diseases of this group were exceeded in importance only by the pathological conditions peculiar to early infancy and by diseases of the digestive system. Against both of the latter disease groups, propagandas are already in operation. The organization and maintenance of a propaganda against diseases of the respiratory system as a factor in infant mortality is fully justified by the important position they occupy.

2. The mortality from diseases of the respiratory system in the first year of life constituted in the registration area, in the calendar year 1913, approximately one-quarter of the total mortality from these diseases at all age periods taken together. One-quarter of the total mortality from diseases of the respiratory system lies, therefore, within the purview of the agencies for the conservation and promotion of infant welfare, and a campaign against diseases of the respiratory system in infancy will form an important factor in any campaign that may be inaugurated against such diseases generally.

3. Bronchitis and pneumonia together caused 96 per cent of all deaths in the first year of life, due to diseases of the respiratory system. A campaign against diseases of the respiratory system in infancy is, therefore, practically a campaign against bronchitis and pneumonia.

4. The percentage of infant mortality chargeable against diseases of the respiratory system in individual States and cities within the registration area, in the calendar year 1913, varied from 10.87 per cent to 22.83 per cent. The percentage for the entire registration area was 15.85 per cent. While these percentages are strongly influenced by variations in the prevalence of diseases other than diseases of the respiratory system, yet they show that wherever there is justification for the maintenance of a campaign against infant mortality, action against diseases of the respiratory system should form an important part of the work.

5. Deaths from diseases of the respiratory system apparently occur to a greater extent during the third week of life than during

any other weekly period. The heaviest month's toll taken by these diseases, in the calendar year 1913, in the registration area, was levied in the first month of life, when 18.62 per cent of all such deaths occurred. Deaths are frequent, however, throughout the entire first year of life. Prevention of deaths in infancy from diseases of the respiratory system is, therefore, a task for the pre-natal nurse, the obstetrician, the midwife, the pediatrician, and the infant welfare station.

THE PREVENTION OF RESPIRATORY DISEASE IN EARLY LIFE

ROYAL STORRS HAYNES, M. D., New York

We have seen, in the past few years, a decrease in the incidence and in the mortality of the diarrheal diseases among infants. Much of the credit for that decrease lies at the door of this Society. The other two important causes of infant mortality, the cases of congenital debility and the respiratory diseases have not as yet shown an appreciable diminution. In fact, one authority claims that, since 1875, the deaths of infants from respiratory diseases have increased 600 per cent.

The widespread prevalence of respiratory disease, and the effect upon the infant of respiratory disease in older children and in adults must be my excuse for presenting to a society avowedly interested in infant mortality some considerations as to the prevention of respiratory disease in early life. Also, many of the circumstances of our daily adult lives, and of our environment which apparently affect the infant little or not at all, yet must be ameliorated if respiratory disease is to be lessened among them, and these we must consider.

Toward the comprehension of respiratory diseases, vital statistics have in the past helped us but little, because the actual morbidity is not expressed in statistics. Most of the respiratory affections end in recovery and few of them are reportable or reported. The amount of injury that is done annually through the medium of the infectious cold alone is almost incalculable. This never fatal illness has among its sequelae and complications serious and crippling affections such as mastoiditis, rheumatism, endocarditis, nephritis, none of which if fatal would be likely to show to what cause the fatal issue was primarily due. Moreover, by reason of the reduced vitality which they leave, infectious colds, to take merely one of the class, open the way to other affections or accelerate the progress of organic disease. So the mortality statistics of respiratory diseases, while they present a grave enough problem, do not truly picture the situation. One does not have to be engaged in the practice of medicine, particularly the practice of pediatrics, for many years to have definitely impressed upon his mind that the affections of the respiratory tract are

the most frequent and important illnesses which he has to treat. From November to June, excluding the care of nutritional cases, the bulk of his practice has to do with the diseases of the respiratory system.

Respiratory troubles are common at all ages, but notably so in the first five years of life. The deaths from respiratory diseases in this lustrum constitute almost forty per cent of the total deaths from these causes, and in the first year of life twenty-five per cent of the deaths from respiratory diseases fall. This has changed almost not at all since 1900. Still gives figures from the King's College Hospital showing that of primary bronchitis, occurring in children up to 10 years, 52 per cent occurred under two years, and 34 per cent under one year; 84 per cent of cases of bronchopneumonia occurred in the first two years of life; in two other children's hospitals, 50 per cent and 30 per cent of lobar pneumonia cases occurred in children under two. Of the affections of the upper respiratory tract we need no figures to have the statement of their great frequency accepted as fact.

The special liability of infants and children under two to respiratory disease is affected during the latter part of the first year by the occurrence of rickets with its debility, its tendency to laryngeal spasm and to thoracic deformity. Later, by the occurrence of measles and whooping cough; and at all times by the common nasal obstruction due to the hypertrophied adenoid tissue. But from birth respiratory diseases begin to be in evidence. Hessthaysen has shown, in a series of 32 autopsies on children dying in the first three days of life, that 42 per cent showed pneumonia at autopsy. This was many times diagnosticated atelectasis. He concludes that the greatest causal factor in these cases of infection must be aspiration of secretions of the birth canal during the second stage of labor. Holt and Babbitt in their investigation of the deaths among 10,000 consecutive births at the Sloane Maternity Hospital called attention to the large number of deaths from pneumonia occurring among the babies under two weeks of age. Nine per cent of the deaths were due to pneumonia, and 8.6 per cent due to atelectasis (of which part, on the basis of Hessthaysen's work, may have been pneumonia). Of these children irrespective of their stay in the hospital, no stay being longer, however, than 32 days, Holt and Babbitt record that 17 per cent, more

than twice the mortality due to obstetrical accidents, died of pneumonia, the infection being acquired presumably after birth, in the hospital.

There are a number of anatomical factors inherent to infancy and early childhood which make these respiratory affections more frequent and more serious. The narrowness of the respiratory passages tends to interfere with the inspiration of air or even prevent it with the slightest swelling. This is true particularly with the nasal cavities which are small corresponding to the small facial part of the head. Here secretions may stagnate and bacteria proliferate with the greatest ease. The larynx, too, is relatively small, the glottis narrow, and the cartilages exceedingly soft and collapsible; tumefaction here is characteristically accompanied by spasmodic contraction. The walls of the bronchi are soft and susceptible to dilation; their caliber is small. The shape of the thorax differs from that of the adult in that the ribs are more horizontal and the thorax assumes somewhat the position of inspiration; hence the respiratory excursion is relatively short. The ribs are soft and do not afford a good basis for the contraction of the respiratory muscles particularly those of expiration. Hence the cough is feeble and the secretions are not expelled. Further, the commonly recumbent position of the infant causes the abdominal organs to gravitate toward the head and to encroach upon the capacity of the thorax.

The young infant presents toward disease a certain resistance due to the natural defenses of the body, the phagocytes and the substances in the blood serum. To these there has been added a certain degree of conferred immunity from the blood serum of the mother, through the placental circulation, and from the maternal milk, particularly the colostrum which has been shown to transfer immune bodies in much greater amount than later milk and whose chemical resemblance to the blood serum may have an importance in this connection.

For the initiation of a respiratory disease we have to presuppose the lowering of resistance by one or more of the factors which cause lowered resistance to disease at all ages. These are, principally, exposure to cold, fatigue, auto-intoxication, poisoning by food or chemicals. To all these the infant is passive. He cannot protect himself. He has to be cared for. He is "an infant crying in the night . . . and

with no language but a cry." Exposure to cold is particularly liable to occur unless extreme care is exercised. The infant has a greater amount of radiating surface in proportion to his mass, which represents his heat production and he is therefore more liable to chilling than a bigger bodied individual. In the normal infant or child, the bacteria which it meets in the air or in the cough spray of infected persons are filtered out by the nasal mucous membrane and killed by the nasal mucus; or, if they get into the bronchi, are wafted back by the waves of the cilia. Exposure to cold and chilling upset this mechanism. McFie says that cold may cool the blood to such an extent as to diminish the bactericidal activity of the phagocytes and the vitality of the cells that line the respiratory tract and that the mucus itself may lose its bactericidal power. To the factors of auto-intoxication, food poisoning, etc., the infant is greatly exposed if he be bottle rather than breast-fed, for he encounters the greater liability to accident of the artificial method, and lacks the immune substances which he would get from his mother's breast.

The infant, too, in unenlightened homes is liable to be kept in too warm rooms and in too many clothes.

In other respects, the general factors governing the occurrence of respiratory diseases at all ages obtain in the infant. The ordinary organisms, the pneumococcus, the staphylococcus, the streptococcus, the influenza bacillus, the micrococcus catarrhalis, and the Friedlander bacillus play their rôle. From the mouth or nose of the infected person they are projected on the particles of cough spray to float for a while in the air and then sink to the ground to become dried out into dust. As they float in the air, they may be inhaled and initiate a respiratory infection. This is not very likely unless the two individuals concerned are close together, for the dilution is great, and greater as the distance is increased. In the dust of the street, through the agency of the sunlight and fresh air, the bacteria quickly die, and so that although here again they may come into contact with a susceptible mucous membrane and proliferate, they are not so likely to do so as was once thought. In the house, in dark places and in damp places they are more viable. The dampness, however, which helps their growth also hinders their rising into the air so that aerial infection in any form is rather less than probable. Ejected in larger amounts in the sputum or the secretions of the mouth, upon handker-

chiefs, bedclothes, etc., or transferred from one person to another by kissing or by any other contact, particularly that of the hands, they may live usually in sufficient numbers to infect, or if few, they may be, because of having passed through a susceptible individual, of sufficiently enhanced virulence to do so. Contact, direct or mediate, is the principal means by which these diseases are carried on.

We have then the problem of preventing infection in a group of individuals, anatomically easy to infect, susceptible because of their age and certain of their ailments, endangered because of their very helplessness and passivity; that is, we have the problem of keeping infants and young children at their highest point of resistance and out of contact with the provocative agents of respiratory disease.

How are we going to do it?

In the general environment in which we live there are factors which react unfavorably toward the prevention of respiratory diseases and which should be overcome.

First, the nuisance of dust. We do not now fear dust as we did ten years ago as a carrier of bacteria; but dust yet has its victims. The increased traffic in our streets, and the higher velocity of wind favored by taller buildings have increased the amount of dust present in the atmosphere at all times. Dust *may* be a direct carrier of infection: it is however deleterious chiefly from its irritant effect upon the mucous membrane of the respiratory tract. Dust should be prevented out of doors by proper watering and oiling of the roadways and in large cities by the elimination of the horse whose excrement dried and pulverized constitutes a large part of the dust we breathe.

Dust is always more abundant in the air of the house than in that of out of doors and it further is more liable to contain viable organisms indoors because of the absence of sunlight. Housekeeping which simply passes the precipitated dust from one place to another is antiquated and dangerous. Vacuum cleaners, dustless dusters, wet sweeping with aid of some of the dust laying powders now available, the use of rugs instead of carpets all will help against this nuisance. The dust that is dried sputum must be prevented by preventing spitting.

The smoke of our large cities has much to do with the prevalence of respiratory diseases and it should be abated. It is the unattractive accompaniment of industrial progress and has without doubt had its effect in increasing the mortality and morbidity of respiratory dis-

eases in industrial centers as contrasted with rural communities. In most of our large cities it is abundant. In some, as Pittsburgh and London, it is characteristic. Of London, Hopkinson Smith, when making charcoal sketches of certain parts of it, said, to show the propriety of his medium, "London is charcoal, and charcoal is London."

Smoke does not carry bacteria; it does its harm through the carbon it deposits in the lungs, because of the irritant and corrosive effects of the sulphur acids it contains, because of its blackness which shuts out a considerable amount of sunlight so necessary for healthful living and the destruction of bacteria. The absence of a normal amount of light in the environment has been found by Weber to give rise to symptoms comparable to those of a close atmosphere, that is, loss of energy, depression of spirits and lack of appetite. Smoke is also a direct inciter of fogs. Fogs are injurious because at low temperature their absorption of heat chills both body and respiratory mucous membrane, while in warm weather, a foggy atmosphere being near saturation interferes with the evaporation of moisture and the elimination of body heat. In London, 20 per cent of fogs are said to be unnecessary and caused by smoke.

Dr. W. C. White has shown in an exceedingly interesting survey of conditions in Pittsburgh relating to pneumonia, there very virulent, that in certain wards of the city where the smoke was abundant and the dust fall high, there, too, the pneumonia mortality was high, while the wards of the city which were freer of smoke were freer of deaths from pneumonia. He attributes this correspondence to the irritant effect of smoke upon the mucous membrane of the lungs.

Departments of health and municipal authorities should meet the evil of smoke and as well the fumes and vapors from manufacturing plants, sugar refineries, gas works, smelters, etc., by making and enforcing adequate legislation.

Crowding, whether it be in tenement homes, in street cars or subway trains, in theatres or in churches takes its toll of respiratory disease and death. Wherever people congregate in numbers there will be an opportunity for individuals with active respiratory disease to transmit it. A cough or a sneeze by a person with coryza in a crowded subway train fills the air with droplets carrying bacteria which can be inhaled by many people in quantities large enough for infection. In New York City, the epidemics of acute respiratory disease which

sweep over the city periodically affecting children in widely separated districts are without doubt due to their transmission in the crowded cars of the great arteries of travel, which carry hundreds of thousands of people daily. The close contact of life in a two-room tenement favors respiratory disease in the little ones; and it is interesting to see that in spite of the readiness with which respiratory disease spreads to every member of the family, it does not spread nearly as readily from family to family or from floor to floor, showing that some closeness of contact is necessary.

The regulation of the two contagious diseases, measles and whooping cough, which predispose to respiratory affections is a matter of general sanitary control of the utmost importance. There is little doubt that the mortality statistics of respiratory diseases would be swelled at least 10 per cent if the deaths really due to this cause but classified as due to measles and whooping cough were included, for almost all the deaths of measles and whooping cough are due to bronchopneumonia. The danger to infants and children from these two diseases is much greater than it need be. We have a lot of educating yet to do before physicians and laymen realize the true seriousness of these two diseases and are willing and trained to cooperate in measures which really will control them. In the case of measles, the emphasis in prevention should be placed not so much on disinfection or the duration of quarantine as upon the early detection and the early quarantine of cases; upon the isolation of susceptible contacts; and upon the necessity of suspecting every case of weeping coryza to be an incipient case of measles. Whooping cough should have much more serious consideration by health authorities; not to report it should be made a misdemeanor; the burden of reporting it should be upon both the physician and the parent; its victims should be compelled to wear some distinguishing garment; cases should not be permitted by the health authorities to run their course, even if mild, without medical superintendence, particular attention should be given to educating in regard to its dangers parents of children affected, and finally hospital provision should be made for the care of its complicated cases.

We demand hospital care for these children with respiratory disease; and yet, in some respects, the hospital is a dangerous place. Respiratory disease originating indoors is peculiarly fatal and is liable to rapid and extensive spread. In a series of figures at one hospital,

of cases of lobar pneumonia on admission, the mortality was 1.9 per cent; of broncho-pneumonia admitted ill, 52.5 per cent; of broncho-pneumonia acquired within the walls, 81. per cent. Chappell and Brown in a study of respiratory infections in infants' wards at the Babies' Hospital, New York, give figures closely corresponding to this. The figures of Holt and Babbitt, already quoted, show what may happen from crowded nurseries and close intermingling of new born infants.

Yet the hospital has done much to show both how infections, and respiratory infections among them, are transmitted and how their transmission may be prevented. Following Grancher who first had the courage to treat in one ward various infectious and contagious diseases, upon the plan of separation of patient from patient and of careful cleanliness upon the part of the nursing staff, hospitals abroad and at home have attained a marked success in the care of communicable diseases without the occurrence of cross infection. Whether the plan be a series of rooms opening upon a common corridor—the box system—a series of partitions separating the ward space into cubicles, the interposition of a screen covered with a sheet moistened with antiseptic, a metal grille surrounding the bed, or simplest of all, a *barrière* of a tape so stretched as to mark out the forbidden area, the results have been, barring accidents, pretty uniformly favorable and encouraging. This success seems to depend entirely upon the excellence of the "aseptic nursing" which is the necessary accompaniment of the barriers. In those institutions where time and careful instruction have been given in the training of the attendants, the success has been greatest. Respiratory diseases seem possibly more difficult to control in this manner than other readily communicable diseases. Measles has been regarded as almost impossible to restrain and has been used as an example of aerial transmission. The view is probably correct that the infecting agent of measles is extremely difficult to remove from the hands and fomites and so is transmitted by contact. The same may possibly be true with respiratory infections, but wherever cross infections are numerous and respiratory deaths occur in large numbers, that institution must be considered to have a careless technique. The attendants do not take sufficient care, or they themselves may be carriers. No hospital attendant should be on duty who is not both rested and well.

It is a question whether a child with a respiratory affection should ever be permitted to attend school. There is really no such thing as "a little cold." The child who is exposed to "a little cold" may develop pneumonia and die. The class into which the child with the "little cold" comes may be deprived of an aggregate of many weeks schooling because that child was not excluded as he should have been, and the little brothers and sisters of the infected child and of his infected classmates, with whom we are particularly concerned, may never live to bring their "little colds" to any school. Here too, the attendant, the teacher, should never be on duty with any sort of respiratory difficulty. The open air school and the open window school besides their many other beneficial results have contributed to lower, to a marked degree, the number of cases of respiratory trouble among their scholars.

In the home must be accomplished the greatest amount of actual preventive work because there the resistance of the individual can be built up through proper care and hygiene, upon which more than upon anything else the success of preventive measures lies.

The treatment of the individual already sick calls for proper isolation; for care in the disposal of the discharges of the mouth, nose and throat; handkerchiefs and cuspidors are to be dispensed with; gauze wipes or paper handkerchiefs to be used and burned. The patient's clothing and bedclothes and eating utensils must be disinfected; the attendant must wash her hands, prevent infectious material being carried on her person, and disinfect her mouth and throat.

It is a moot question whether disinfection after illness is necessary; but it will do no harm. What is necessary without doubt is a thorough cleansing of the room in which anyone has been ill with respiratory trouble with soap and water, sunlight and fresh air.

An interesting experiment at Dartmouth College shows that the periodical attempt at disinfection of class rooms and assembly rooms where the movement of crowds stirs up dust and where darkness favors the viability of organisms may lower the incidence of disease. It was found on taking cultures of the air of class rooms that they often showed high bacterial counts. An arbitrary standard was set for the indication to disinfect the rooms. During the year before this went into effect, of 850 men 131 or 15 per cent had colds or influ-

enza; the next year with this plan in operation, 1229 men had 32 colds or cases of influenza or 2.5 per cent.

If infants and young children are to escape respiratory diseases, the utmost care must be taken in regard to daily hygiene in order to conserve their powers of resistance. The factors of food, clothing, sleep, the air they breathe, the temperature in which they live, their baths, their going out, all must be regulated along preventive lines.

Infants and young children must have suitable food in amounts sufficient to supply their need for energy, heat and growth. Pestilence follows famine and the terrible need of the poor in our great cities during last winter has been apparent to us all in the increased respiratory mortality noted throughout the year. No doubt this increased mortality was due partly to lack of fuel and clothing and to overcrowding; but too little food is the foundation upon which they all rest. In our dispensaries, the histories elicited last winter showed most pitifully the deprivations which were being met by the dispensary class because the father was out of work and there was no money to buy bread. Unemployment must be attacked in the prevention of respiratory diseases.

Too much food may likewise be bad for it necessitates the production of a larger amount of body heat and the dissipation of it; this may disturb the heat balance and favor infection.

Inasmuch as the school child brings home disease which being hungry has helped him to acquire, school lunches may play an important part in our campaign.

The clothing of the young child should protect him from chilling and permit the escape of his self generated heat. In cold weather socks and bare knees are dangerous. The body surface which is habitually chilled loses in time its ability to respond to cold by the dilatation of its superficial vessels, so that the temperature may be lowered and with it the resistance of the individual. However, in the majority of instances, clothing needs to be taken off children rather than put on, for the zealous mother is over strenuous in this regard. The proper functioning of the skin demands adequate dissipation of the body heat. This is accomplished by heat transfer and evaporation. Heat transfer (radiation and conduction) serves until it does not work rapidly enough. Then evaporation of perspiration abstracts a large amount of heat rendering it latent in water vapor. Too warm

clothing limits heat transfer. The body heat then rises and perspiration ensues. With non-absorbent clothing it is evaporated with difficulty or not at all and the body is bathed in warm moist air which prevents the further elimination of heat, endangers the general health and in the long run weakens the vasomotor mechanism of the skin so that the normal responses to heat and cold are less active than normal and the individual loses in resistance. Sleeplessness, restlessness and irritability are signs of discomfort in the infant who is over clothed. A suitable clothing for next the skin is one which will permit of slow radiation of heat and rapid evaporation of moisture. By this means the skin is kept dry and warm but not hot. The skin reacts properly to stimuli of cold and heat, the vasomotor tone is maintained and resistance is heightened.

Loss of sleep is a great factor in the causation of respiratory diseases. It is not usually common in childhood except as a result of illness or indigestion; but such illnesses or indigestion as occur contribute to the occurrence of respiratory disease. Hence great care must be taken in the treatment of illness to manage so that the greatest amount of sleep may be secured; quiet should obtain in the sick room and about the house; food and medicine should be given so that as few periods of disturbance shall occur as possible. In connection with sleep, one factor is of extreme importance. The functions of heat regulation and heat production, at best but poorly developed in early life, are during sleep and anesthesia, more or less in abeyance. The individual approaches the condition of a cold blooded animal and his body temperature fluctuates with the temperature to which he is exposed. So it is particularly important to see that during sleep children are warmly enough clad, especially in the early hours of the morning.

We are all advocates of fresh air, but our ideas as to the efficacy of ventilation have changed. It is not necessarily new air that we require. The CO_2 and the "crowd poisons" need not trouble us if by motion and low temperature the heat of the body is removed. This does not mean that we do not benefit from "fresh, cool flowing air." We do. Man has resided in the open air many centuries and his skin reflexes work best with a full perfusion of air. Thus he is best conditioned to resist disease. Sometimes, ages hence, our reflexes may work better indoors. Now, the nearer we approach outdoor life and air, the

better will our defenses be. For the ill effects of badly ventilated rooms come not from the "vitiating" air of these rooms but from the fact that in a stagnant atmosphere the body cannot "unwarm" itself. In a room in which the air is not frequently renewed or artificially cooled and set in motion, it quickly becomes warmed from the heat transfer of the body. As the temperature approaches that of the body the air can absorb less heat and perspiration follows. If the air be still, there soon accumulates about the body a layer of warm moist air which cloaks it and prevents the elimination of heat so that all the effects of too much clothing are apparent. If the air be set in motion comfort is restored even in air containing twenty times the amount of carbon dioxide ever found in badly ventilated houses.

The regulation of the heat and humidity of the atmosphere of houses is important. Our houses are too hot. They are too dry. They resemble the atmospheric conditions of the deserts, while outdoors the air may be cold and damp from an east wind blowing off the ocean. The room heated to 72° F. with a relative humidity of 25 per cent seems colder to the body than 65° F. with a humidity of 50-60 per cent and it has disastrous effects upon the respiratory mucous membrane from which it abstracts moisture to partly make up its deficiency. Prolonged stay in such an atmosphere makes transition to a cold damp air dangerous because of the congestion which the cold causes and the chilling of the relaxed and congested mucous membrane by the heat abstracting power of the cold dampness. It may be that adenoids are due to the artificial heating of our houses and their lack of moisture. They have become fearfully abundant in the half century or more during which central heating has been in general use.

A house kept at 65° F. with a humidity of 60 per cent will be a house comfortable in the coolest weather and nearly free from respiratory disease. As a patient said to me recently, "Two years ago we had a poor furnace and could hardly keep warm, but we didn't have a cold all winter. Now we have a wonderful furnace and we have one cold after another."

Going out brings up again chilling and the moisture factor of the atmosphere. Cold, damp, windy days predispose to respiratory difficulty because of the danger that children will become too cold. Cold dampness quickly removes the heat from the clothing. Wind removes

heat very rapidly by replacement of air. On a combination of windy and damp days the result is multiplied and it is on such weather that the greatest number of cases of respiratory disease arise. To prevent the bad effects of such days children should be warmly clothed and on wet windy days an overgarment of light windproof, waterproof material would serve better to keep the heat in than the heaviest woolen. Such a garment for the poor might be of oilcloth.

A properly functioning skin is a clean skin. Baths prevent respiratory disease. Cold sponging helps to "harden" children because it gives exercise to the vasomotor system and keeps it active. This could be accomplished as is done by the Japanese by very hot baths of short duration which have a stimulating effect similar to that of cold. There is greater danger however that hot baths will be too prolonged.

The prevention of constipation is an important work toward the aim we have in view. Clinically, constipation alone or in combination with fatigue, loss of sleep and exposure is present in the etiology of almost all respiratory affections, particularly infectious colds.

By way of medical intervention, several avenues for prevention present themselves. Vaccines have been recommended to raise the individual resistance toward the bacteria accompanying colds. Allen in 1908 called attention to this method and claimed then as he has since that excellent results may be obtained in this manner. Favorable reports have appeared now and again and the method may have a future. It is subject to the possibility that the organisms causing the next cold will not be identical with any toward which the individual's immunity has been raised.

The presence of adenoids and tonsils is so great a menace to the continued prevalence of respiratory affections that their removal should be recommended whenever they cause symptoms. Mouth breathing shunts the air around the nasal mucous membrane. It is not cleaned nor warmed nor moistened as it should be and result must be a lowered resistance upon the part of the bronchial membrane.

The bacteria which cause respiratory disease, when they do have a habitat in the body usually reside in the mouth. The nasal cavities in health, and the pharynx and larynx, cavities whose secretion is

almost wholly pure mucus are usually nearly if not quite sterile by virtue of the bactericidal qualities of the mucus which seems to be an ideal substance for protection against bacteria and for lubrication. The mouth on the other hand teems with bacteria which grow well there. The bactericidal qualities of the buccal mucus are not so manifest and there is constantly present food stuff and sometimes decaying matter in the cavities or around the roots of teeth.

Mouth disinfection should be attempted. Wadsworth in 1906 in working against the pneumococcus, produced a mouth wash which was alkaline, dissolvent of mucus, non-irritating, bactericidal and which may be used prophylactically with benefit.

The consideration of all these factors leads us back to the realization that in the prevention of respiratory diseases, as in other infectious processes, there are two principal factors (1) the destruction or exclusion of the infecting organism and (2) the preservation of the resistance of the individual, of which the second is now recognized as being by far the more important.

We see in connection with the first condition that transference by contact is the method in most cases and that it may be avoided by real cleanliness.

We see in connection with the second, that the preservation of a perfectly functioning vasomotor system is of the greatest importance in the protection of the individual against the physical enemies of his environment; that the accumulation of the products of fatigue and intoxication must be prevented if the natural defenses of the body are to be adequate.

How can we as an association undertake to meet the need for the prevention of respiratory diseases?

I would suggest that there be appointed a committee on the prevention of respiratory disease. Among the duties of this committee would be to prosecute the following work:

a. To supervise the conduct of an intensive investigation of respiratory affections, in a selected area in a selected city, much as has already been done for the results of prenatal hygiene. Such an investigation should be able to determine with some accuracy the relative importance of various factors in the etiology of these diseases and the value of prophylactic measures. It would embrace the work

of statisticians, social workers, physicians, physiologists, sanitary engineers and bacteriologists.

b. To arrange for the publication of articles in medical and lay press dealing with the importance of these affections with the view to acquainting people in all walks of life with the danger and the loss of life, of time, of health and of money which these diseases cause.

c. To investigate the health laws of the various states with a view to determining what has been accomplished in legislation along these lines and to suggest helpful changes to make the health laws more effective and complete.

d. To initiate an educational campaign by means of lectures to reach those whom the printed articles will not reach. Among the class of society who rely on the dispensary and the milk station, talks to mothers may be effective.

e. To stimulate greater care of the child before he enters school by laying greater emphasis on the medical supervision of the child between the milk station and school age, the age of measles and whooping cough and very little maternal attention.

THE TREATMENT OF RESPIRATORY DISEASES, WITH SPECIAL REFERENCE TO THE VALUE OF FRESH AIR

JOHN LOVETT MORSE, A. M., M. D.,

Professor of Pediatrics, Harvard Medical School; Visiting Physician to the
Children's Hospital and Consulting Physician to the Infants'
Hospital and the Floating Hospital, Boston

The value of fresh air in the prevention of diseases of the respiratory tract in childhood having been discussed by the previous speaker, I will consider it only in relation to the treatment of diseases of the respiratory tract.

There seems to be a great deal of confusion in the use of the term "fresh air." Some writers apparently mean by this term pure air without regard to its temperature, others seem to mean cold air without regard to its purity, others air which is both pure and cold, and still others apparently do not attach any definite meaning to it. It is necessary, therefore, before speaking of the value of fresh air to determine exactly what fresh air is. In common parlance the opposite of "fresh air" is "bad air" or, as is sometimes said, the air is "close." Everyone appreciates that he is not as comfortable when he is in a room which is shut up as he is when the ventilation is good. Everyone also appreciates that he is not as comfortable in a room in which there is a considerable number of people, if the ventilation is poor, as he is when he is alone in the same room. Why is he not as comfortable in one place as in the other? What is there or is there not in the air of the "close" room which makes it uncomfortable?

It was formerly supposed that the discomfort felt in a close room was due to the presence of toxic organic constituents derived from the breath or to an excess of carbon dioxide in the air. There is much difference of opinion as to the presence of organic matter in the expired breath. The weight of evidence seems to show that it contains very little, if any. However this maybe, it has been proved conclusively experimentally that the symptoms experienced in a badly ventilated room are not due to poisons excreted in the breath.⁽¹⁾ It has also been proved that people can breathe for many hours without dis-

comfort air containing a very much larger proportion of carbon dioxide than is ever present in a room, provided the temperature of the air is low and that it is in motion.⁽²⁾ Recent experiments seem to show, on the other hand, that the discomfort is due to a disturbance of the normal thermal relations of the body, the symptoms experienced in a close room being very similar to those felt on a hot, damp day.⁽³⁾ The cause of the discomfort is apparently an interference with the normal rate of loss of body heat. Three factors are concerned in this interference: the high temperature of the air, its high moisture content and lack of movement in the air. It is evident, therefore, that as fresh air is the opposite of bad or close air, the essential characteristics of fresh air are not freedom from carbon dioxide or a hypothetical organic poison, but coolness, dryness and motion of the air. Therefore, fresh air may be defined as air which is cool, dry and in motion.

It is evident, therefore, that fresh air need not necessarily be pure air, if by pure air is meant air which does not contain bacteria or dust. Both of these may be present in air and yet it will be fresh.

It is self-evident that if the well feel better in fresh air than in close air, fresh air is better than close air for the sick, whether or not suffering from diseases of the respiratory tract. It is also evident that air which is free from dust is more suitable in these conditions than air which is full of dust. It is also evident that improper ventilation increases the dangers of reinfection from the patient and of infection from other patients or attendants.

Coolness is one of the essential elements of fresh air. Cool air is not, however, cold air. Does cold air have a different action from cool air and, if so, what is the action of cold air? The action of cold air may, in this connection, be divided into two parts—that which it has on the respiratory mucous membrane and that which it exerts on the system as a whole.

Very little is known accurately as to the action of cold air on the respiratory mucous membrane. Clinical experience shows, however, that when the mucous membrane of the respiratory tract is acutely inflamed, as in the early stages of nasopharyngitis, laryngitis or bronchitis, cold air acts as an irritant, increasing the cough and the symptoms of heat and tightness of the chest. Clinical experience shows also that in nasopharyngitis after the acute stage is passed and the

mucous membrane is swollen, cold air relieves congestion and diminishes the discomfort. Cold air cannot under any conditions have any action on the mucous membrane of the respiratory tract below the trachea or largest bronchi, because it will be warmed before it reaches it.

It is well known that the application of cold to the surface of the body acts as a stimulant to the vasomotor system. Howland and Hoobler (⁴) have shown that in pneumonia in children the exposure of the face of the children to cold air produces a rise in the blood pressure. They found that when the children were put out of doors in warm weather the blood pressure was not raised. They concluded, therefore, that the all important factor in raising the blood pressure was the temperature of the air (not its freshness). They state that there is "no doubt that an increase in the blood pressure, when it is abnormally low, which is constant and continuous and which is brought about without exhaustion or bad effects is of the greatest value."

It is generally believed by clinicians that failure of the peripheral circulation is a frequent cause of death in pneumonia. This belief rests on the assumption that the blood pressure is abnormally low in persons dying of pneumonia and on certain experiments which seem to show that the vasomotor nervous mechanism is paralyzed in fatal pneumonia. Weigert, (⁵) from his own experience and from the study of the literature, concluded, however, in 1911, that no rule can be established for the blood pressure in pneumonia, and consequently blood pressure readings are of no prognostic value. Newburgh and Minot, (⁶) in 1914, from a study of a considerable series of cases, found that the systolic pressure in the fatal cases was continuously above the systolic pressure in the persons who recovered. They conclude, therefore, that failure of the peripheral circulation cannot be a common cause of death in pneumonia. The experimental work of Porter and Newburgh (⁷) has also shown that the vasomotor centre is not impaired in fatal pneumonia in animals. It is evident, therefore, that whatever systemic action cold air may have in pneumonia, it is not through its action on the vasomotor system.

Having considered the action of fresh air and cold air, we are now in a position to speak of the use of fresh air and cold air in the treatment of diseases of the respiratory tract. It is evident from what

has been stated that the elements of freshness and coldness in the air must be considered separately. On account of the paucity of scientific data, it is necessary to rely almost entirely on the results of clinical observation. The conclusions which I have arrived at as the result of my own observations are as follows:

In the early stages of acute nasopharyngitis, cold air increases the irritation of the mucous membrane and consequently the symptoms, but in the later stages, when the mucous membrane is swollen, it relieves the discomfort to a certain extent. Cold air predisposes to affections of the ears. Fresh air is of advantage. Children with acute nasopharyngitis should, therefore, be kept in the house in cold weather, in well-ventilated rooms at a temperature of about 60° F. if they are in bed, and between 65° F. and 68° F. if they are out of bed.

In acute laryngitis, cold air has a strong irritant action on the inflamed mucous membrane, and in the early stages increases the symptoms very materially. Cold air is not indicated, but does no harm in the later stages. Patients are more comfortable when the air is moist than when it is dry. Children with acute laryngitis should, therefore, be kept in well-ventilated rooms, at a temperature of about 70° F., the air being kept moist.

In the early stages of acute bronchitis, cold air increases the cough and the sense of constriction of the chest and of heat under the sternum. The cough is less troublesome when the air is moist than when it is dry. Children in the early stages of acute bronchitis should, therefore, be kept in well-ventilated rooms at a temperature of from 60° F. to 70° F. with the air moistened. During the later stages, cold air ceases to act as an irritant, but there is no apparent advantage in cold air over air which is warmed. Moisture is of no importance, because the mucous membrane of the bronchi is already moist. The temperature of the room is of less importance at this time. During the later stages of bronchitis they should, therefore, be kept in well-ventilated rooms in which the temperature of the air is moderate, but not cold.

In very acute bronchitis associated with dyspnoea and cyanosis, the contraindications to the use of cold air are the same as in the milder cases. There is never any lack of oxygen in the air, therefore there is no advantage in out-of-door air. There is no more oxygen, moreover, in cold air than in warm air. The only possible advantage

to be derived from cold air is, therefore, from its action as a vasomotor stimulant. It is problematical, moreover, whether this action is of value. The comparative disadvantages of cold air as an irritant to the mucous membrane and its advantages as a vasomotor stimulant must be weighed in each case.

When bronchopneumonia has developed, the most acute stage of the causative bronchitis is usually passed. There is, therefore, no contraindication to the use of cold air. There is, however, no advantage in it, unless there is vasomotor paralysis. The advantage even then is questionable. A child with severe bronchopneumonia is very likely to be weak and depressed. It may be further weakened and depressed by exposure to cold air. Children with bronchopneumonia may be chilled and injured by exposure to cold in the same way that well children may be. There is, therefore, no invariable rule as to the use of cold air in the treatment of bronchopneumonia in children. They are, however, unquestionably benefitted by fresh air. As a rule, children with bronchopneumonia are probably better off in well-ventilated rooms at a temperature of between 50°F. and 60°F. than they are out of doors in cold weather, unless there is vasomotor paralysis. The advantages and disadvantages of cold air must, then, be weighed in each case and the decision made on the evidence on the two sides.

The bronchial mucous membrane is not involved in lobar pneumonia, therefore there is no contraindication in this disease to the use of cold air. There is no question that in this disease the general stimulant effect of cold air is of advantage. There is also no question that children with lobar pneumonia are much more comfortable in cold air than they are in warm air. Children with lobar pneumonia should, therefore, be treated out of doors or near open windows. While children with lobar pneumonia are undoubtedly more comfortable when treated with cold air, it is doubtful whether the mortality of lobar pneumonia in childhood has been lowered materially, if at all, by the cold air treatment. The statistics at present available are insufficient to show the influence of this form of treatment on the mortality. If children with lobar pneumonia are exposed to cold air, whether out of doors or in the house, they must be dressed for it. They, in the same way as children with bronchopneumonia or even well children, may be injured by exposure to cold. It is sufficient to expose the face. The body must be warmly covered and protected.

In conclusion: Fresh air is of advantage in the treatment of all diseases of the respiratory tract. It is also of advantage to have the air pure, that is, free from bacteria, dust and smoke. Cold air is of advantage in some conditions, but harmful in others. It must be used with discretion. It is not possible to treat all diseases of the respiratory tract in the same way.

BIBLIOGRAPHY

1. Rosenau & Amoss—*Journal Medical Research*. 1911. XXV, 35.
Crowder—*Archives of Internal Medicine*. 1913. XII, 420.
Weisman—*Biochemical Studies of Expired Air in Relation to Ventilation*. Easton, Pa. 1913.
Editorial—*Journal Amer. Med. Assn.* 1914. LXII, 304.
2. Paul—*Ztschr. f. Hygiene*. 1905. XLIX, 405.
Benedict—*Bull. 175, Office of Experiment Station, U. S. Department of Agriculture*. p. 235.
3. Editorial—*Jour. Amer. Med. Assn.* 1911. LVII, 980 and 1913. LXI, 1986.
4. Howland & Hoobler—*Amer. Journal Diseases of Children*. 1912. III, 294.
5. Weigert—*Voilkmann's kl. Vorträge*. 1911. 459.
6. Newburgh & Minot—*Archives of Internal Medicine*. 1914. XIV, 48.
7. Porter and Newburgh—*Amer. Journal of Physiology*. 1914. XXXV, 1.

DISCUSSION

Dr. L. Emmett Holt, New York: This subject which has been brought before us today is perhaps the most important one at present before those interested in the prevention of infant mortality. It is something accomplished when we have the problem stated and realize how complete it is and how great the difficulties. With the problem of the congenital conditions we have now a pretty definite program outlined for us; so also with the problem of diarrhoeal diseases and feeding; but the problem presented by the respiratory diseases is so complex, it involves so many things, that we find it a very difficult one to discuss and a still more difficult one to solve. Referring to the points brought out in the paper by Dr. Haynes, on causes and prevention, we cannot too much emphasize, especially in the social work of our visiting nurses, the fact of the communicability of respiratory diseases.

Let us speak first of the dangers of exposure of the nursing child particularly to infection from the mother. Of course we do not expect that nursing infants are to be weaned because the mother has a cold, but there are many simple precautions which the mother may take which will greatly diminish the chance of spreading infection. She may at least cover her mouth and nose with a handkerchief while nursing and refrain from coughing or sneezing while holding the child and at all such times from kissing the child. Again, the number of trained nurses and nursery maids who convey their own infection to the children they are caring for is large. Allusion has also been made to the children of school age who bring home infections to their smaller brothers and sisters. Now all of this comes about because the parents at home do not realize the great susceptibility of these small infants. The infant in the home is always the most

susceptible member of the family and needs a greater protection than is given to any other member, and we cannot I think too strongly emphasize the necessity of quarantining the infant when other members of the family have colds. It is usually more difficult to quarantine the other members of the household than to quarantine the infant. All this is particularly true with reference to premature or very delicate infants. One physician of my acquaintance makes this rule with trained nurses caring for such patients "if you get a cold, you lose your job!" For no infant is to be taken care of by a trained nurse who is suffering from any form of respiratory infection.

The question of the communicability of pneumonia in particular is one that presents an important field for discussion. We know that there are several distinct types of the pneumococcus, some of which are very contagious and very persistent; others much less so. It is believed that the organism most frequently the cause of pneumonia in infants is the least virulent of all the varieties of the pneumococcus known. In Dr. Cole's classification it is called Type No. 4. This is found in great numbers in the noses and throats of healthy people who have never had pneumonia and do not develop it. Some of the others are rarely found except in people who have had pneumonia recently or been in close contact with it. The pneumococcus seems to be an almost omnipresent organism. We can hardly hope to get rid of it. Exposure to it is something we must always reckon with. Our efforts, therefore, must be directed largely along the lines Dr. Haynes has suggested, to employ means to increase the general resistance of the infant in every possible way—especially by fresh air in the cold season. The treatment of acute respiratory diseases in young infants by cold air is quite another matter. I believe more deaths than cures have been the results of the general and indiscriminate use of this treatment. I personally think, with Dr. Morse, that this is something which must be used with a great deal of discrimination. I must confess to having seen a great amount of harm done by the treatment of severe acute respiratory diseases, especially in the case of young infants, by exposure to cold air. I recall the cases of infants a few months old who were kept before wide open windows in cold weather; I found them cyanotic and sometimes with a temperature sub-normal. Fresh air is extremely important for all infants suffering from acute respiratory disease, but the younger the infant, the greater the care and judgment that must be exercised with reference to cold air. I am in accord with Dr. Morse with reference to bronchitis and inflammations of the larynx and trachea. Putting such patients, dyspnoeic and often cyanotic, into a warm apartment or even a steam room brings about in a few hours a different condition. This is especially the case in the early stage of these diseases. Of the two evils, the exposure to very cold air of all infants with acute respiratory diseases and the plan followed by the French Canadians in lower Canada where they nail down the windows at the beginning of winter and keep the fire going night and day, it is pretty hard to choose. Both are equally to be avoided.

Dr. S. McC. Hamill, Philadelphia: I know it is a very common and often unpardonable custom for those participating in discussions to consume time in saying kindly things of the papers which have been presented. I have no hesitancy, however, in following this sometimes reprehensible course today. As Dr. Holt has said, we have had presented to us this morning one of the most important subjects connected with the problems of infant mortality, and in a form which to my knowledge has not been paralleled. The paper of Dr. Woodward, for the lack of interest of which he apologized before reading it, I think was one of the most interesting statistical papers I have ever had the privilege of listening to, and if Dr. Haynes left untouched any possible point in the etiology and prevention of the respiratory diseases, I do not know what it was.

His task was not an easy one. Indeed, it is a very difficult matter to take up a new phase of any important subject and present it as effectively as he did. It is really the work of an artist and I think that his paper should be especially commended. The feature of Dr. Morse's paper is that he has taken no extreme view. In other words, he has stood for the rational use of fresh air. Therefore I think that as an association we owe these gentlemen a vote of thanks for the work they have done. They have laid for us a foundation upon which we should begin to build along the lines of prevention of respiratory disease.

It naturally follows from what I have said that I have little to offer in the way of criticism. I do, however, feel that a word of caution should be expressed in regard to two statements in Dr. Haynes' paper. One was the use of vaccines in the prevention of colds. It seems to me that the whole question of vaccine therapy is so much up in the air at the present time, that the reported favorable results of vaccine treatment are so questionable, and that the dangers attached to the use of vaccine are so definite, that the subject should never be presented to an audience, especially to an audience composed in part of laymen, without a word of caution against the promiscuous use of vaccines, because vaccines are being used very promiscuously in the treatment of all kinds of conditions at the present day. The other point is the use of nasal douches. I agree thoroughly with the results which Dr. Haynes quotes as to Dr. Chappell and someone else having had in the use of a nasal douche in the prevention of the spread of common colds, but here again I think a word of caution should be given, because the unintelligent and promiscuous use of any form of nasal douche is apt, in the final analysis, to accomplish more harm than good. In reference to Dr. Morse's paper, I am in thorough sympathy with what Dr. Morse has said. I think the use of fresh air has been very incautiously developed. I think that there has never been any very definite attempt to differentiate between the use of cold air and the use of fresh air, and I think that when Dr. Morse used the statement that in the treatment of all of these conditions, we must consider an individual and not a group, and therefore apportion our dosage to the individual needs of the patient, he said practically everything that it is necessary to say. There is one thing I did not hear Dr. Morse say, that I should like him to mention in closing; namely, what he considers cold air in contradistinction to cool air. In reference to the treatment of one type of disease, he has expressed a preference

for a minimum temperature of 60 degrees. Now it seems to me that possibly such a temperature might sometimes be considered too low in some particular case, which brings us back to the statement I just made, that it is a question of treating the individual. I know on the other hand that it is sometimes possible to use lower temperatures in the treatment of some forms of respiratory disease.

There is one other thing that should be spoken of, and that is the best method of securing fresh air. Dr. Morse has defined fresh air as air that is cool, dry and moving. Now I know of no way of getting that combination of conditions except through the medium of open windows. I know of no system of ventilation that accomplishes the results one can obtain through the medium of open windows, and therefore I believe that in the fresh air treatment of disease, the proper way to obtain your fresh air is through the medium of open windows and not by means of any of the ventilating systems that have been developed up to the present time. There are no patent ventilating systems in the houses of the poor, and we must therefore resort to the open window.

Dr. J. P. Crozer Griffith, Philadelphia: Some years ago I had the occasion to occupy an unpleasant position, similar to that of the noble Trojan lady, Cassandra, in warning some of my friends in the profession that something was going to happen in the matter of the so-called "cold air treatment" of respiratory diseases. Now I fear I am in danger of filling the equally unwelcome place of the man who says "I told you so". It never had been proven satisfactorily to my mind that an indiscriminate employment of cold open air for the treatment of pneumonia, or for any other respiratory disease, was to be advised, and that all previous methods had been entirely wrong. It had seemed to me that the assumption that the prognosis of pneumonia went hand in hand with the height of the blood-pressure was *only* an assumption, not a proven fact; or rather that it was open to too many exceptions to constitute a rule of action. When I ventured to make this protest at one of our Medical Society meetings a few years ago, whatever the sentiments of those present may have been I stood almost alone as regards verbal support. Naturally it is a satisfaction to me to see my own views receiving adherence at this time.

Listening today to Dr. Morse's paper and the discussion upon it, the question will naturally arise, why is the medical profession again modifying its opinion and its treatment? Did physicians go too far in their high recommendation of "cold air treatment", judged by the effect upon the blood-pressure, or in any other way? In the light of what we have just heard, it must be confessed that this is the case. This is, in a sense, the fault of the medical profession, but in no sense a reproach; and I am making no apology. It does not seem to me that the profession, to which I am very proud of belonging, needs any in this connection. But physicians are just human beings, like everyone else, and liable to all the failings and frailties and enthusiasms which human beings exhibit; so that in our search for truth it is very easy to adopt some treatment so thoroughly and exclusively that it becomes a fad. That the very extensive employment of cold air in respiratory diseases is, in fact, a fad, and too urgently in-

sisted upon by physicians, is shown by the degree to which the enthusiasm for it has gone beyond the physicians themselves into the hands of nurses, hospital managers, and the laity in general. It has even come to the point that I know of one hospital where the management has practically taken it out of the hands of the staff, and has decreed that the pneumonia cases may be placed in the open parlors of the hospital without previous quarantine against a possible infection, but that cases of no other disease may enjoy this privilege. Now this is manifestly not as it should be.

I am speaking of it, because it shows what influence the enthusiasm for this treatment has had upon the people at large. It is clear that if physicians, with the thought and study which their life-work necessitates, are uncertain about the good of any plan of treatment, and liable to change as experience extends, it is a very unsafe matter for anyone else to entertain any opinion whatever about it. What Dr. Morse has said entirely expresses my own views. I am familiar with the literature on experimental investigations which he has quoted. He might even have gone further, had he desired, and given you some of the views of writers, based upon clinical observations, who have expressed dissatisfaction with the blood-pressure as a test for the prognosis and treatment of respiratory diseases, especially pneumonia. Everybody believes in *fresh* air in disease as well as in health, and great progress has been made by the employment of *cold* air in respiratory diseases. On the other hand, I am convinced that it is a plan of treatment far from being of universal application, and one which must be employed with great judgment. I believe, with Dr. Holt, that we see cases made worse by it, yet also observe others which appear to improve only after the treatment is begun. It seems to make the cases of croupous pneumonia more comfortable; but whether it diminishes the mortality in this disease is very questionable, since it is well known that the great majority of cases of this form of pneumonia occurring in early life after the period of infancy will recover in any event. In broncho-pneumonia, when there is much catarrhal secretion present, it is probable that in most instances other plans of treatment are to be preferred.

Dr. Cressy L. Wilbur, Albany: I wish to refer more particularly to Dr. Woodward's paper, because it dealt with the subject of statistics, but I shall not attempt to discuss the details at the present time except to refer to his remarks in regard to the absence of certain data in regard to infant mortality. The foundation of the operations of this Association for the prevention of infant mortality is the registration of births and deaths, more particularly the registration of births, because our registration of deaths is usually fairly effective. It has been a shame and a disgrace to the civilization of this country that the births of infants are not registered and that the Children's Bureau did not have effective data for conducting its work; that this Association should not have the best data available in the shape of reliable rates of infant mortality. The American Medical Association has taken an active part in connection with the Bureau of the Census and the American Public Health Association, and registra-

tion laws have been adopted in many states, but they have not been enforced thoroughly in any state of the Union. The only exception, to some extent, is the State of Pennsylvania, and I wish to congratulate the people of this state on the splendid work done by Dr. Batt, and supported by Dr. Dixon, in actually *enforcing* the law for the registration of births by the imposition of fines on physicians and midwives who do not comply with the law. I have some good news to bring you from New York, and I think it will mark the turning point in the fight for reliable statistics of infant mortality. This letter is dated November 6, 1915, addressed to me as Director of the Division of Vital Statistics, State Department of Health, Albany, New York, and reads as follows:

Dear Dr. Wilbur: During the past year the Department of Health under your direction has made sincere and repeated efforts to acquaint practicing physicians, midwives, undertakers and local health officers and registrars with the provisions of the Vital Statistics Law, particularly in relation to the registration of births and deaths.

It is of the utmost importance that the vital statistics of the State should be complete and accurate. Under the Public Health Law the duty is specifically imposed upon the State Commissioner of Health to enforce the provisions of this law. The Director of the United States Census has advised me that the State of New York will not be admitted to the birth registration area until the law requiring filing of birth certificates is thoroughly enforced.

The Vital Statistics Law of New York State is based upon the model law drawn up by the representatives of the United State Census Bureau and a Committee of the American Medical Association, and is regarded by all those who are most competent to judge as perhaps the best law which has yet been enacted.

It is my duty and my purpose to enforce its provisions without discrimination; and I wish to hereby direct that after this date *every* violation be forthwith reported to the district attorney of the city or county in which the violation occurs for prosecution, with the reminder that the several district attorneys are specifically required by the law to prosecute when so requested by this Department. Where the violations are first violations and unintentional, I would suggest that the district attorney be requested to ask that only the minimum fine of \$5.00 be imposed. In this connection, I wish to say that in any instance in which the strict enforcement of the law works a hardship or an injustice, either in your judgment or that of the district attorney or the officers of the court before whom the case is brought, in any primary violation I will personally pay the fine—but I wish the prosecution to be brought in every case whatever nature the violation may be.

Yours truly,

HERMANN M. BIGGS,
Commissioner of Health.

That order will be carried out and we shall have the hearty cooperation of New York City, which is under separate jurisdiction. Dr. Haven Emerson, City Commission of Health, assures me that he will carry out the same provisions for the city, and we will thus have New York State solid for the enforcement of the law in every case of failure or neglect to register a birth within the legal limit, five days for the State, ten days for New York City. If Pennsylvania enforces its law prescribing a penalty for failing to file a report within ten days, we shall then have two great states, with some eighteen millions of population, forming a fine nucleus for the absolutely correct registration of births in the United States.

Mr. Louis F. Dublin, New York: Three groups of diseases predominate at distinct periods in infant mortality. Infants dying on the first day and in the first week of life die from congenital causes. At the end of this period diarrhea and enteritis become significant and do their greatest mischief during the first quarter. The *respiratory diseases* come into prominence at the end of the first quarter and maintain first place thereafter until the end of the first year of life. These diseases, which include the three principal causes, acute bronchitis, bronchopneumonia and other forms of pneumonia, together account for about 20 per cent of the deaths for the first year. In a group of cases which I studied in Fall River, the percentage was 19.9; in New York City in the year 1914, the percentage was 22.0. During the first quarter of the year in Fall River diseases of the respiratory system were only 4 per cent of the total, in the second quarter they increased to 46 per cent, in the third quarter to 56 per cent and in the fourth quarter to 54 per cent. Bronchopneumonia is the most important of the three conditions, being responsible for about half of the respiratory deaths. Lobar and other forms of pneumonia and acute bronchitis are about equally important.

It is possible that the number of deaths from the respiratory diseases is increased because of faulty reporting of causes by physicians. Very often such diseases as whooping cough and the other acute infectious diseases of children terminate in pneumonia and no reference is made on the certificates to the primary conditions.

It is of interest to note that the respiratory diseases during the last seven or eight years are not showing the same amount of reduction in their proportionate representation as are the other conditions in infant mortality. The greatest reduction has been made in the incidence of the diarrheal diseases. If anything, the respiratory conditions are becoming more important rather than less. During the last forty weeks in New York City there were 622 more infant deaths than in the corresponding period of the previous year and of these 294 (44.2 per cent) were from the respiratory diseases. It would seem that the efforts of the Babies Welfare Associations are not as effectively organized to control this group of causes as against the intestinal disturbances; therein lies a large opportunity for those working in infant mortality.

Dr. Godfrey R. Pisek, New York: I cannot go away from this meeting without feeling that I must say a word in regard to this apparently unsettled question of fresh air. Unless I am very much mistaken, I did not interpret Dr. Hamill's and Dr. Morse's remarks in the same spirit that Dr. Griffith did. *Fresh air* and *exposure* should and must be differentiated. We have in this audience today a great many nurses and social workers, and they should not go away, it seems to me, with a mistaken notion as to the attitude of the medical profession (particularly those in the branch of pediatrics), in regard to this important phase in the treatment of respiratory diseases. The exposure of infants in outdoor pavilions in all sorts of weather, without special appurtenances and without keeping up their body heat, is one matter. Giving them fresh air, in freshly

ventilated rooms under proper precautions, is sane and is a treatment we can all be in accord with. It seems to me that we must not be led to believe that there is a reactionary feeling and must not feel that the pendulum is swinging the other way. I hope I am interpreting the sentiment here correctly when I speak in this way. I do not want to have our nurses and social workers go away feeling that we have gone too far in the other direction.

Dr. Haven Emerson, New York: The timeliness of this subject has much impressed itself upon New Yorkers, because it is quite apparent that although the infant mortality rate in New York was 94 last year, it will more nearly approach 100 if not surpass it in 1915. The reason is not the return to diarrheal diseases but the increase of respiratory diseases incident to the epidemic of measles which swept over the city in the winter and spring of last year. Respiratory diseases as a cause of infant mortality will play even a larger part than at any previous time in our records as the cause of infant mortality. The question is where have these deaths been in the highest proportion? We find in the hospitals broncho-pneumonia following measles or broncho-pneumonia among little children has resulted in death in a much higher proportion of cases than in the homes where patients could be taken care of by visiting nurses or physicians. Without quoting exact figures, my impression is that figures are available showing that the death rate in the hospitals was approximately 50 per cent in children under a year with broncho-pneumonia following measles, and that the same cases gave a death rate of between 5 and 8 when they were treated in the home. Now the question is, why do we take a child to the hospital? The result of the analysis that was made of all the children admitted to the Willard Parker Hospital in New York, with broncho-pneumonia accompanying measles or developing broncho-pneumonia after being admitted with simple measles, shows that it is quite evident that the reason they were there was because there was no home to keep them in; either they were transferred from other institutions or taken from homes where the mother went to work and the child was otherwise disposed of at the day nursery or where there was really no home, where the home had been broken up by disease at the same time among other members of the family. Now it has been a rule that no children of this age are to be referred to hospitals unless conditions in the home makes it imperative and show that the only care they can get is by sending them to the hospital. We wish to advise against referring patients of this class and age to hospitals because of the better results that come from the care of those children in the home, even in homes that appear not to have the best hygienic surroundings. Furthermore, this movement should be considered in connection with two other matters now before us, one the prenatal care of the children, the other the relationship between hard times and disease. The great importance of prenatal care with regard to the existence of children in the first weeks and months after birth is generally accepted. The impression of the nurses who visited cases in New York, last winter was very strong that the high rate of mortality was particularly due, as indicated in the paper, to the poverty of the poor people in New York, the lack

of coal, the shutting of the windows and the warming of their apartments by body heat. And I would also call attention to the recent article by Mr. Matthews on "*The Muckers*," in *The Survey*, showing the extent to which it was possible for people to support themselves on the wages paid them for the work they do for the city or for contractors. Insufficient wages to support life may well be considered a determining factor in the causation of respiratory diseases in infants.

Dr. Raymond B. Hoobler, Detroit: I am exceedingly glad that Dr. Pisek has raised the question as to whether we should go away from here feeling that the treatment of certain forms of respiratory disease should be regarded as a fad. I am sure that I gleaned from the papers, as well as from the remarks of Dr. Holt and Dr. Hamill, that the treatment of certain forms of respiratory disease by cold air, was not a fad. Each of them suggested that there were two groups of cases, some that would do well in the open air or cold air, and some that would not do well. Now we have recognized that from the very beginning, and I think it would be a good thing to emphasize some of the points that help us to decide which is a case for open air treatment and which is a case for indoor treatment. I remember in the work that we did in Bellevue and in the work that has been going on in Detroit, that we have tried to classify them in this way; if a child that is given the open air treatment complains of cold, or if, on feeling the extremities, I found that the feet were cold and the hands were cold and the child was generally uncomfortable regardless of the amount of clothing and covering put over him, that child was not a fit subject to treat out of doors. Another child that would be constantly coughing when put out of doors and quiet when indoors, certainly is another type of child that should not be put out of doors. If a child that seems perfectly comfortable and is breathing fairly regularly in the ward, becomes more distressed when put out of doors, and if he becomes cyanotic when put out of doors, he is not a fit subject for treatment out of doors and should be removed back to the ward. A child that is constantly crying and fretting when put out of doors, but which is perfectly comfortable and happy indoors, is another type that does not do well out of doors. Most of these points were gleaned from Dr. Holt as many as five or six years ago, when the work was taken up at Bellevue. It seems to me that it is necessary that we use good sense in the choice of our patients and fair observation—and I think we must have a day or so of observation of a child out of doors, possibly less than that, sometimes it can be decided in an hour or two, but we should at least put those children indoors who are showing untoward symptoms when put out of doors.

Mr. F. S. Crum, Newark, N. J. I am speaking as a statistician, not as a physician, but I have been listening intently and have not heard any one say anything about the necessity of keeping the respiratory passages open. It seems to me that some one ought to mention the all too common trouble and annoyance and possible after effects, of leaving such impairments un-cared for. In Newark, in 1914 and 1915, two so-called Better Babies Contests were held, and out of 248

babies examined, ages six to twelve months, 47 were found to have adenoids and 39 enlarged or diseased tonsils. I feel that such conditions ought to be considered at a meeting of this kind and that you may well go on record as being unalterably opposed to that instrument, first of pleasure and then of torture, used almost everywhere, particularly in ignorant families, the so-called "pacifier." I believe medical experts admit that this is one of the most common causes of adenoids.

There is another point I want to bring out, and that is that perhaps altitude has something to do with respiratory diseases among young children, in certain sections of the country. The highest whooping-cough mortality rate in the world is in La Paz, Bolivia, on account of the altitude of that city. A very high pneumonia death rate is found in Leadville, Colorado, for the same reason.

Whooping-cough and measles each cause, throughout the civilized world, one per cent of the total mortality, or together two per cent and referring to Dr. Emerson's statement that the respiratory death rate has gone up in New York because of measles, I think those causes should be referred back to measles rather than be classified in the respiratory group. I think that the primary cause should be reported as measles and not as respiratory troubles.

Dr. Percival Eaton, Pittsburg: I want to emphasize two points which were made, one in Dr. Haynes' paper, and one in Dr. Morse's paper. Dr. Haynes noted in regard to prophylaxis in respiratory diseases, the fact that children were apt to wear too many clothes. I think we all ought to teach both the doctors and the social workers and nurses, that children wear clothes (outside of esthetic reasons), mainly for the purpose of keeping a layer of warm air next the skin, which is a protective layer, keeping out cold and heat, and letting out heat from the body. Now it is the custom in many parts of the country, and I suppose in all parts, for many people in the lower walks of life to really clothe their children according to the calendar, and not according to the thermometer. I believe that if children have a constant layer of warm air next their skin, which can be easily obtained by wearing the same weight of clothes the year round, that it is a very simple matter to add to the outer clothing as the thermometer demands, and I think that one of the things we could do in our social work is to supply those people who cannot have thermometers, reasonably accurate and cheap thermometers, so they can know the temperature and then have them trained to look at them every morning to see how the children (before they go to school or go out) should be dressed, and that that little catch phrase of dressing the children "according to the thermometer and not according to the calendar," is one that would be very helpful to us. I also want to emphasize what Dr. Morse said in regard to the distinction between cool air and cold air. I happen to live in one of those two cities mentioned as being the two dirtiest in the world (and I don't live in London), and there we find the need of fresh air for the little children and the older children too, and we can get it, minus a good deal of the dampness, of which we have much, and minus most of the dirt, of which we also have much, if we adopt a very simple expedient, that is the protection of the open space in the window by cheese cloth. It is a very simple matter to take four screw-hooks

and put them in the four corners of the window-frame, and then, by taking a cheese cloth and hanging it in these four hooks, have sufficient protection from dirt and dampness. I have done that myself in my bed room for several years, and I use two sets, because the cheesecloth gets dirty very soon and has to be washed. In Pittsburgh we very rarely have very cold weather, but we can get cool air minus its dampness and its dirt, both of which things are drawbacks in the matter of these respiratory diseases.

A Member: I think everybody in the room would be glad to hear from Dr. Jacobi.

Dr. Abraham Jacobi, New York: Except Dr. Jacobi.

The Chairman: Will Dr. Jacobi close the general discussion?

Dr. Abraham Jacobi: I was not here when the papers were given but what I have heard since I came into the room convinced me that nearly 60 years ago, when I began teaching, I was not quite so stupid as I took myself to be 25 or 30 years afterwards. I was of the opinion at that time, which has been expressed this morning, that if you talk about the treatment of pneumonia, that is, after all, a misnomer. I am not a Christian Scientist, I know that pneumonia exists, but I know that your pneumonia and your pneumonia and yours are not one and the same thing. You speak here of the difference between lobar pneumonia and bronchial pneumonia and their treatment. I have been teaching that these last 50 years and more, but I never speak about the subject of pneumonia without telling my friends and my students that they have one single patient to deal with and not *a* pneumonia. As long as doctors talk about "pneumonia" and the treatment of pneumonia, they are on the wrong track. Let the doctors teach their students better and make better doctors of them, then they will come to the conclusion to which I came a great many years ago, that the principal thing in the diagnosis and in the head of a doctor is to have brains first. You cannot always find that; and therefore I am of the opinion, for I miss it myself a great deal, that unless every case is studied, no matter what you call it, you will not treat your patient well. Now a good deal of that has been said in the abstract I read this morning of Dr. Morse's paper. Evidently he is developing into a very mature teacher and he will certainly develop a great many good children's doctors. If he does that, he will render good service not only to the profession but to the public, and as I have been told that many of the ladies here are nurses, I will include the nurses. Unless your doctors are complete doctors, you cannot expect that your nurses and your hospital managers will do better than they do now, and I may state that in my opinion, most of them do very badly. As long as doctors are not able to impress their own nurses with the fact that they are their superiors and that they know what they are about when they see a single case, the nurses will be their superiors at least in the management of that case, and so it may happen, as it has been stated here this morning, Mr. Chairman,

that the managers will take hold of a case and say "pneumonia" or "bronchial pneumonia", this, that or the other, "must go into this or that special room, no matter what the doctor says". As soon as we have come to that, we are on the wrong track altogether, and what I have to say is that my friends and pupils and successors in the different positions of teaching, as long as they are not able to make good doctors, substantial doctors and doctors of character, you will be in this peculiar situation in which you are run by the nurses and by the managers. I believe I am well understood in what I say now. I have been interested in little babies these 60 years, almost as long as since the time when I was a baby myself, but I have certainly not lost sight of looking at what you all have been doing. There are a number of my former pupils here, a large number of my friends, and I am glad to know that pediatrics is in a good way of developing. I know that is so and I am very glad of it, but I believe that unless we consider ourselves bound not to speak any more of treatment of pneumonias, treatment of bronchial pneumonias, in certain rooms, we are wrong. What I mean to say is simply this—that the better pediatricists you create here in our schools in the United States, the better for the babies, the better diagnosis will be made and the better nurses will be made, too; the better managers of hospitals will be made; but unless we are men, unless we professional men are men and real doctors, call them pediatricists or call them doctors, I prefer doctors all the time—unless that is done, we shall land nowhere. Now, Mr. Chairman, you have not landed anywhere this morning, from what I have seen. I know that Dr. Morse is a good teacher, but he could not prove to you that all those here are on the wrong track. He is on the right track, I have not the slightest doubt. If he were here, I should like to tell him that I know that in every case of a sick child, he makes his individual diagnosis, but he does not make a diagnosis of the ward of pneumonia, etc., and etc., but he takes every single case and treats every single case singly and individually. I always have to beg your pardon for making these remarks, but then although you are young, all of you are so young that you have time to correct your mistakes ever so many times. I have had a good many opportunities of correcting my own mistakes, but I haven't got so much time left, now. It is not every centenarian that is allowed to get up before his pupils and their pupils and their mothers and grandmothers, as I have the opportunity of doing in a good many instances, for instance here. We shall not make mistakes when we have knowledge enough and character and consistency. As long as we, all of us, mean to be manly doctors first and then pediatricists, then we shall succeed and that is what I have been looking forward to, these more than 60 years I commenced the regular teaching of pediatrics in 1860 and even before, but I am glad there are so many very worthy, very capable successors.

The Chairman: Will Dr. Woodward close the discussion on his paper?

Dr. Woodward: I have nothing more to say from the standpoint of statistics, and possibly I should not voice the sentiment that I am about to express—that is, my very great disappointment at the trend of the discussion. We have

heard a very great deal about curing pneumonias, but we have heard relatively little about preventing them, although after all it is the prevention of the pneumonias and diseases of the respiratory system that we are chiefly interested in. I expect in the end we will find prevention summed up in several very simple things: In the matter of clothing, in the matter of housing, in the matter of exercise, in the matter of personal cleanliness. And when this Association can take these four things and bring them home to the individuals of the community, to the mothers, to those who are responsible for the care of babies and of children, we may hope, I think, for a reduction in the number of cases of diseases of the respiratory system. Until, however, we have that general dissemination of information, we cannot hope for much diminution in the prevalence of these diseases, however much diminution there may be in the number of deaths due to our more skilled treatment of the cases when they have occurred.

Dr. Haynes: I would like to second most heartily what Dr. Woodward has just said; that should be the kernel of the whole morning's meeting. I would also like to emphasize one or two points brought out in the discussion, especially what Dr. Holt said about the infection of the child by the nursing mother. That is, indeed, important. I have in mind an infant who was nursed by its mother who had whooping cough, and yet it did not get the disease, simply because the mother knew how to be careful when she was nursing. As to the quarantining of the infant in the house from other members of the family—that also is important. I recollect another case where cleanliness and care prevented an infant from having whooping cough when every member of the family had it and the child occupied the same house. As to the matter of cold air, if I may say one word, I think we all are agreed that fresh air hurts no one and that possibly cold air does not hurt any *well* individual. It is necessary, though, to decide with the utmost care what ill children shall be subjected to cold air. Dr. Hoobler's classification was excellent. However, in dealing with older children, we can assume some ability on the part of the patient to tell how he feels. It seems to me that the danger in the use of cold air on infants is that you use it upon an individual who cannot tell you how he feels. We personally meet cold air ourselves when we are well with pleasure; when we are ailing, we know enough to be careful and put on extra clothing, but we do not give the child the chance to make that response, and as I said in my paper, his passivity should also be considered in giving cold air to him. We noticed some years ago when we had a little hospital by the river during the summer, the Junior Seabreeze, for the care of diarrheal diseases, that the cold air in the early fall was responsible for the large increase in the number of deaths of children who had been hanging on, and I think under these circumstances cold air is not a benefit. Dr. Morse spoke of fresh air as having as one of its valuable qualities, its dryness. That should be qualified, because dryness will depend on the relative humidity and the amount or lack of saturation that is present.

I agree thoroughly with what Dr. Hamill said about my paper in regard to the use of vaccines. It happened in this way: I was conscious of the length of

my paper, and when I got to that stage of it I was very aware of Dr. Fife's being behind me, and therefore when I read it I clipped certain parts. In regard to vaccines and the post nasal injections, I did not recommend that they should be used; I said they had been recommended by others. I think that Dr. Hamill's position was well taken, and I believe that the result at the Babies' Hospital subsequent to Dr. Chappell's and Dr. Brown's work has not been so favorable toward the use of post nasal injections. In New York, as in Pittsburgh, we have come to realize that individuals should not be clothed according to the calendar, that in the changeable climate in which we live, we have sometimes winter in the morning, autumn in the forenoon and summer in the afternoon, and we should make changes accordingly.

Dr. Morse: Dr. Hamill's question as to the difference between cold air and cool air is very difficult to answer. I purposely dodged it in my paper; I feel that when it is 50 degrees it is cold and above that is cool. I suppose everybody would have their own ideas on that. I wondered, while hearing the various papers, whether Dr. Haynes and Dr. Holt realized what a hole they were getting doctors into. If the patients have to be isolated when they have a cold, if the children have to stay away from school, if the nurse has to be discharged when she has a cold, I don't see but what the doctor has to give up his practice and income when he has a cold; it's only logical. Then it was very evident to me in Dr. Eaton's remarks about clothing a child according to the thermometer, that he had forgotten when he used to live in Boston; nobody can decide in Boston in the morning what he is going to need in the middle of the day and evening. I had hoped, in my paper, that I had made it clear what the differences were between fresh air and pure air and cold air; but it is very evident from some of the discussion, either that some of the gentlemen who discussed the paper do not agree with me or that they did not understand me. Certainly everybody it seems to me, would agree that whatever respiratory trouble a child had it ought to have fresh air, and pure air, and that the only question would come on the temperature of that fresh, pure air. It seems to me that we can not lay down a general rule as regards the temperature and that the temperature has to be regulated partly in relation to the disease but more in relation to the individual patient.

SESSION ON OBSTETRICS

Wednesday, November 10, 1915, 2.30-4.30 p. m.

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STATEMENT BY THE CHAIRMAN:

At the request of the President of the Association, the program for the Session on Obstetrics has been arranged to include the discussion of the midwife as she exists in the United States.

It is well known that a large percentage of births, especially among the immigrant population of our cities and in the rural districts of our States, are attended by midwives.

It is hoped that the discussion will emphasize the responsibility of the American public and the medical profession in permitting the practice of obstetrics by this class of practitioners. Are American women, either native or foreign born, to be permitted in their ignorance to continue to receive a standard of care which fails to apply efficiently our modern knowledge of the principles of surgery and asepsis? How may future generations be safeguarded, how may the percentage of preventable deaths of infants and the invalidism of mothers be reduced?

THE EDUCATION, LICENSING AND SUPERVISION OF THE MIDWIFE

J. CLIFTON EDGAR, M. D., New York

The problems emanating from the consideration of the education, licensing and supervision or of the eventual elimination of the midwife, have in the past few years attracted much attention, and are undoubtedly closely allied to the study and prevention of infant mortality, as well as maternal mortality and morbidity.

The time has come when the problem of the midwife in this country must be reckoned with.

In the past the responsibility for the midwife, has been entirely ignored, or assumed in a half-hearted manner in isolated instances.

Papers have been prepared and read upon the subject, indeed several notable ones before this Association; medical societies have discussed the problem; resolutions have been adopted and committees on ways and means appointed.

It is a deplorable fact that little of a practicable nature has been accomplished.

Broadly speaking, three standpoints are taken in this country. First, the midwife must be abolished. Second, the midwife had best be ignored and left to her own devices. Third, the midwife should be raised to a higher plane by proper State control and education.

The first proposition, is in my belief, after a thorough study of the situation, impossible, until some better substitute for the midwife is at hand, to care for some 40 per cent. of pregnant women in childbirth, as at present. The second proposal is unworthy of consideration. The third proposition is at the present time the only practical way of dealing with the Midwife Problem; whether it has for its object solely the temporary safeguarding of helpless women and children, or a more far-reaching aim—namely, the final elimination of all but educated midwives.

Today an anomalous condition exists in this country. On the one hand physicians and, even trained nurses, before they are permitted to enter upon the practice of their profession, are required to receive several years' instruction in the care and treatment of the sick, as well

as special instruction in the treatment and care of child-bearing women and new-born infants.

On the other hand, although about forty per cent of the confinements in this country are cared for by midwives, these same midwives are, except in rare instances, ignorant, untrained, incompetent women, and some of the results of their obstetric incompetence are, unnecessary deaths and blindness of the infants, and avoidable invalidism, suffering and death of the mothers.

It is unfortunate moreover, that only in recent years, and that, only in isolated instances, has any attempt been made to eliminate the midwife or instruct her, or to regulate, supervise and control her work.

The elimination of the midwife at present, is an impossibility, her ultimate elimination is an open question.

The consensus of opinion throughout the country points to the truth of this statement; and this was the belief of this Association, as brought out at the First Annual Conference the Association held in Baltimore, November 9-11, 1910.⁽¹⁾

Since the evil for the moment, cannot be eradicated, the danger to the public can be minimized by some provision for the proper regulation, supervision and control of the midwife by the State.

The argument from time to time, has been advanced, that the so-called trained midwife is a safer obstetric attendant than some of the newly graduated physicians from our medical colleges.

In the past this was undoubtedly true in many instances, is even true to a less degree today.

The statement, that in some localities the midwife has fewer cases of puerperal infection in her practice than the physicians in the same locality, is, if true, no argument in favor of the midwife, but rather for the raising of the standard of medical education.

Even if we today admit, as this Association was told four years ago at the Chicago meeting, by Dr. J. Whitridge Williams,⁽²⁾ in his paper on "The Midwife Problem and Medical Education in the United States," that the midwife with all her faults, is not responsible for as many deaths as the ignorant doctor who refuses to recognize his limitations, this admission on our part is still no excuse for the

⁽¹⁾Transactions, First Annual Meeting, American Association for Study and Prevention of Infant Mortality, Baltimore, 1910.

⁽²⁾Transactions, Second Annual Meeting, American Association for Study and Prevention of Infant Mortality, Chicago, 1911, p. 192.

existence of the midwife, but a call for a higher medical standard in our medical schools, especially in obstetric teaching. This ideal medical standard is being rapidly put into practice, so that in the coming generation of medical men, no such comparison with the midwife will be possible.

The most satisfactory way to abolish the more objectionable part of the midwife problem, is to recognize the midwife, place her under control, and state educational requirements, and to elevate these latter to such a height that only intelligent midwives shall remain to practice.

Somewhat similar measures have recently accomplished much for medicine in this country. Witness the fewer medical schools, fewer and better medical men graduates from the schools, and a general uplift along all medical lines. In the United States during 1913, as compared with 1912, the medical schools were decreased by 14, the students by 1,200, and the graduates in medicine by 500.⁽³⁾

One cannot but be optimistic as regards the future of medical education. The work in the uplifting of the standard of medical education begun and carried forward by the American Medical Association, and recently strengthened by the American College of Surgeons, will gradually, but surely, eliminate the incompetent medical man.

Without in the slightest degree belittling the importance of the education, licensing and supervision of midwives, let us, in all our endeavor along these lines, ever aim at the ultimate elimination of the midwife.

The question of the "elimination of the midwife" was ably presented at the Third Annual Meeting of this Association, by Dr. Charles Edward Ziegler.⁽⁴⁾ Quite recently, again, indeed within the past few weeks, Dr. Ziegler, the reader of the foregoing paper, thus expressed himself:⁽⁵⁾

"Any scheme for improvement in obstetric teaching and practice which does not contemplate the ultimate elimination of the midwife will not succeed."

⁽³⁾ Report of Federal Bureau of Education.

⁽⁴⁾ Transactions, Third Annual Meeting, American Association for Study and Prevention of Infant Mortality, Cleveland, 1912, p. 222.

⁽⁵⁾ The Teaching of Obstetrics, Charles Edward Ziegler, M. D., American Association of Obstetricians and Gynecologists.

"This not alone because midwives can never be taught to practice obstetrics successfully, but most especially because of the moral effect upon obstetric standards."

It is quite within the bounds of possibility that the extension of maternity hospitals as well as further development and increase of our outdoor maternity services will in time render the existence of the midwife unnecessary.

A rough estimate recently made of the number of patients cared for by maternity hospitals and dispensaries in the Borough of Manhattan, alone shows, that about 10,000 were last year confined in maternity hospitals as charity patients and 7,000 in their own homes, a total of 17,000 free confinements.

A study of birth returns for the City of New York during the past ten years is instructive. For 1905, 1906, 1907, 1908, the percentage of births reported by midwives is about the same, namely in the neighborhood of 43.0 per cent. But in the past six years there has been a gradual but persistent decline in the births reported by midwives until in 1914 it reaches 37.6 per cent, as is shown by the following table:

CITY OF NEW YORK
BIRTHS REPORTED

1905—Physicians	60,051	
Midwives	43,830	42.1 per cent.
1906—Physicians	63,661	
Midwives	48,111	43.0 per cent.
1907—Physicians	68,136	
Midwives	52,536	43.5 per cent.
1908—Physicians	71,210	
Midwives	55,652	43.8 per cent.
1909—Physicians	73,359	
Midwives	49,616	40.3 per cent.
1910—Physicians	77,071	
Midwives	52,010	40.2 per cent.
1911—Physicians	82,788	
Midwives	51,756	36.4 per cent.
1912—Physicians	82,390	
Midwives	53,265	39.2 per cent.
1913—Physicians	83,770	
Midwives	51,364	33.0 per cent.
1914—Physicians	87,650	
Midwives	52,997	37.6 per cent.

How readily a Maternity Dispensary service is built up, is well illustrated in our experience with the Bellevue School for Midwives. We started our school upon August 1, 1911. In the five months from

that date to January 1, 1912, the school cared for 54 confinements in its hospital building and 6 in the surrounding tenements.

In the year from January, 1912, to January, 1913, it cared for 185 patients in the School, and 131 in the tenements, and in the year from January, 1914, to January, 1915, 307 in the School and 630 in the tenements.

But this solution of the problem is not so simple as it at first sight appears.

As has been recently pointed out by Grace Abbott in her article on "The Midwife in Chicago,"^(*) the immigrant woman employs a midwife, not only because she is cheaper than a doctor, but because the patient prefers a midwife to a doctor, who is a man.

The women among the foreign-born population, who employ a midwife because she is a woman and not a man in New York, is very large. Be the number large or small, the recent movement to encourage graduate nurses from our training schools to fit themselves for obstetric work not only in the city tenements, but in the rural districts, would meet this objection.

It is planned to offer a course of midwifery this autumn in the Washington University Hospital in St. Louis, open only to graduate nurses and offered for the purpose of increasing their equipment to do rural visiting nursing.

There is the woman who employs a midwife because she is cheaper than the doctor; and secondly the woman, usually in our experience, of the new immigrant class, who secures the services of the midwife because she prefers a woman "doctor" to a man doctor. Moreover an advantage, to the patient, of the midwife over the doctor, which never must be lost sight of in any plan for the elimination of the midwife, rests in the fact, that the midwife not merely delivers the woman, but often bathes the mother and baby, cares for the other children of the household, and frequently acts as housekeeper and cook as well.

Our observation points to the fact, that while newly arrived immigrants often seek the services of midwives in their first confinements, they later apply to maternity hospitals, or outdoor maternity services for their subsequent labors. Innumerable hospital records are available to illustrate this fact.

(*) Publications of the Immigrants' Protective League, Series I. No. 4.

The elimination of the midwife as such, need not necessarily cause any great hardship, for most of the better class of midwives now in existence, could subsequently find a livelihood, should they wish it, in caring for the older children and the household during the mother's two weeks absence in a maternity hospital, or during the time the mother is confined to her bed in her own home under the care of a dispensary physician. It would be quite feasible that the one-time midwife would act as a moderate priced obstetric nurse under the last condition. Indeed, it is not uncommon for licensed midwives to apply to the training school for nurses of some of the smaller New York hospitals for admission to the course of training for nurses.

It is most unfortunate, that for those women who can and wish to pay for their confinement in a maternity hospital, there are very few moderate-priced private rooms in our New York hospitals available for such patients.

EDUCATION

The gist of the matter is, that since, for the moment, the midwife cannot be eliminated, she must be educated, licensed and supervised.

The licensing and supervision present no insurmountable obstacles, but the education of material such as offers itself in New York City, is a much more difficult problem.

The countries of the Old World, have faced this problem and solved it with greater or lesser success.

Most of us are familiar with the training of the German midwife and it may not be generally known, as Miss Alice Gregory of the National Training School for Midwives in England has pointed out, that Holland, Belgium, France and Italy give a full two years' training to their midwives; and that Norway, Sweden and Denmark, one year.

England faced this problem and solved it as late only as 1902, by the establishment of the Central Midwives Board by an Act of Parliament entitled "An Act to Secure the Better Training of Midwives and to Regulate their Practice."

Miss Caroline C. Van Blarcom, secretary of the New York Committee for the Prevention of Blindness, has studied at first hand the details of the English method and described it in a report entitled

"The Midwife in England—being a Study of the Working of the English Midwives Act of 1902."⁽¹⁾

The success in any branch of education rests largely in the material with which we have to deal.

Miss Crowell's graphic accounts of the character of the midwife in New York City, in 1906, show that of the 500 midwives personally interviewed, less than 10 per cent could be classified as capable, reliable midwives; the rest were hopelessly dirty, ignorant and incompetent. Over 90 per cent in New York City hopelessly dirty, ignorant and incompetent. So much for their characteristics.

The education of previously ignorant and untrained women to be midwives in courses of three or six months' instruction, is an impossibility.

A graduate nurse, from a training school in good standing; can undoubtedly be trained in six months or less, to become a safe and efficient attendant upon cases of normal labor, and could be depended upon to realize her own limitations and seek professional aid, should danger threaten or occur.

The possibility, on the other hand, of educating a woman, previously ignorant of all medical matters to become an efficient midwife in one or even two years is an open question.

However disheartening the outlook, an attempt to educating the midwife has to be made, and a modest beginning in this direction, was begun some four years ago, on August 1, 1911, when the Bellevue Midwife School opened its doors.

We are none too proud of our Bellevue School, principally because of the too short course of instruction, but still you must bear in mind it is the first wedge, a beginning, and the only school of its kind in this country.

It is my great pleasure in this connection, to refer to an interesting, historical coincidence. Less than half a century ago, there was opened at Bellevue Hospital in New York City, the first Training School for Nurses in this country, based on the Nightingale plan. The establishment of this school was due solely to the vision of Miss Louisa Lee Schuyler, who formed the Committee, which subsequently organized the Training School.

⁽¹⁾Publications of the National Committee for the Prevention of Blindness, No. 13, 1913.

The same mind which conceived the importance of introducing in this country courses of training to fit honorable and intelligent women to care for the sick, has recently appreciated the dangers which are due to and may result from allowing untrained midwives to care for mothers and babies.

And so at old Bellevue Hospital, the cradle of trained nursing in this country, was also started The Bellevue School for Midwives, the first institution of its kind in this country, and opened in April, 1911.

This Midwife School was the direct result of the work and planning of the New York Committee for the Prevention of Blindness, organized by Miss Schuyler in 1908, and of which she has been the wise and devoted Chairman ever since.

The actual establishment of the Bellevue Midwife School was due entirely to the efforts of Dr. John Winters Branham, President of the Board of Trustees of Bellevue Hospital. He had such faith in the practicability of the views of the New York Committee for the Prevention of Blindness, that of his own accord, he secured from the City sufficient funds to make possible the little Midwife School mentioned.

Possibly a brief report of the first four years' work on the Bellevue School for Midwives, the only one of its kind in this country, would interest the Association.

REPORT OF THE BELLEVUE MIDWIFE SCHOOL, FROM AUGUST 1, 1911 TO AUGUST 1, 1915

Applicants for training are accepted from residents of New York City, between the ages of twenty-three and thirty-five, who must be cleanly in their person and homes, and of high moral character. There are no fees for instruction; board and lodging are also furnished free of charge. Applicants serve a probation period of four weeks, after which they are registered as pupils if they have shown suitable aptness. They must live in the school, and pursue a six months' course, during which they are taught the management of normal confinements, and to recognize abnormalities. Instruction is given by a visiting obstetrician, the resident obstetrician and superintendent. In addition, practical demonstrations are given and bedside clinics are held daily in the wards of the school.

During the *first two months*, the work includes the care of the mothers and babies in the school; *the second two months*, assisting at

labors in the hospital and in the tenement district; attend clinics, and post-partum calls on out-patients under the supervision of a graduate nurse. The *last two months*, pupils deliver patients, first in school and on the district, under the direction of the resident obstetrician. In conjunction with the school, a pre-natal clinic is held every afternoon at two o'clock. At the clinic, applicants for care during confinements are registered, short histories are taken, urines are examined, physical and pelvic examinations are made, instruction as to hygiene is given to the patient, probable date of confinement estimated and patients told to return at definite intervals. This is an important feature in the course of the pupils, as each is required to serve a definite time in the clinic and make examination under the direction of the resident obstetrician. Pupil midwives serve at least ten hours daily, every week. Each midwife must witness or assist in at least eighty deliveries and in addition, deliver a minimum of twenty cases. When this course is completed, a practical and oral examination is given by a visiting obstetrician, and if the candidate successfully passes these, a diploma is granted.

SCHOOL ESTABLISHED AUGUST 1, 1911

Number of inquiries or applications from prospective midwives.....	803
Number of applications from prospective midwives accepted.....	204
Number entered school.....	106
Number of pupil midwives dropped from roster on account of illness, incompetence, character, etc.....	40
Number of pupil midwives in school at the present time.....	33
Number of graduates of the school, 1912, 25; 1913, 22; 1914, 40; 1915, 36; (six months)	123

NATIONALITY OF THE GRADUATES

Italian	30	Rumanian	1
German	24	Slavish	1
American	13	Bohemian	1
Hungarian	13	Russian	4
Polish	10	Swedish	1
Irish	5	Finnish	1
English	3	Norwegian	1
Austrian	6	Swiss	1
Scotch	3	Lithuanian	2
Danish	2		

NATIONALITY OF PUPIL MIDWIVES IN SCHOOL

Italian	12	Polish	6
German	3	Russian	1
American	4	Irish	1
Hungarian	3	French	2

NUMBER OF APPLICATIONS TAKEN OF PATIENTS AT CLINIC

Year	Year	
August, 1911	January, 1912	39
January, 1912	January, 1913	421
January, 1913	January, 1914	1,218
January, 1914	January, 1915	1,351
January, 1915	August, 1915	1,018
		<hr/> 4,047

Number of patients registered undelivered, to be delivered, and delivered elsewhere1,816

DELIVERY OF PATIENTS	IN SCHOOL HOSPITAL	IN TENEMENTS
August, 1911 to January, 1912	54	6
January, 1912 to January, 1913	185	131
January, 1913 to January, 1914	230	464
January, 1914 to January, 1915	307	630
January, 1915 to August, 1915	190	534
	<hr/> 966	<hr/> 1,765
Total.....		2,731

Number of Maternal Deaths at the School:

1. Septic pneumonia—oedema of lungs, (delivery normal) 3
2. Accidental hemorrhage—hydramnios.
3. Suicide—ruptured uterus.

Number died after being transferred to Bellevue:

1. Rupture of uterus (ventral fixation had been done) 3
2. Puerperal sepsis—(labor uneventful, negative blood culture)
3. Ruptured pelvic abscess, myocarditis.

Maternal mortality 0.21 per cent.

NUMBER OF FOETAL DEATHS AND CAUSES

Prematurity	7	Pneumonia	1
Atelectasis	4	Fractured skull	1
Syphilis		Cong. malformation of heart.....	2
Generalized hemorrhages or hemophilis	4	Rupture of adrenal gland.....	1
Malnutrition	1	Cerebral hemorrhage	2
Unknown	4	Melena neonatorum	1
Abscess of parotid gland.....	1	Total	29

NUMBER OF CASES TRANSFERRED TO BELLEVUE (Mothers)

Contracted pelvis	19	Phlebitis	2
Abscess of mammary gland.....	2	Secondary syphilis	1
Alcoholism	1	Toxaemia	1
Psychopathic	3	Otitis media	1
Influenza	2	Sepsis puerperal	2
Miscarriage	1	(One bad Widal reaction)	
Salpingitis and pelvic cellulitis...	2	Hemorrhage	1
Ventral fixation	1		
Hydramnios	2	Total	41
Number of sapremia (no mortality).....	6		
Number of mammary gland abscesses.....	2		
Number of infections of umbilical cord.....	0		
Number of gonorrhoeal ophthalmia.....	1		
Number of deaths of outpatients.....	0		
Number of infections of outpatients.....	0		
Number of revoked licenses from Graduates of Bellevue Hospital School of Midwives	0		

The conservative nature of our teaching at the Bellevue School for Midwives, is shown by the fact that in the first four years of its existence the forceps were used only 67 times in 2,731 cases; or once in each forty cases, a forceps percentage of 2.4 per cent.

Not the least advantage of our primitive attempt to educate the midwife at the Bellevue School, is the thorough teaching of each candidate for graduation her limitations. The material that we have to work with is often poor, if not impossible; our standards of education as yet may not be of the highest; the six months course allowed us, is all too short for anything like an adequate training, but one important fact is instilled into the brain of each midwife, and that is the knowledge of her own limitations—the knowledge of what *not* to do, and when to seek the aid of a practicing physician.

If we must have the midwife among us, then let us hope that the standard of her education be placed so high that only the more intelligent will be able to successfully compete for license to practice.

The higher standards sought for the training and examination of midwives in England, through the provisions of the Midwife Act, have resulted in securing for the profession a higher class of women. These now include not only the well-educated and well-trained graduates of standardized midwifery schools, but also many nurses who recognize the value and importance of midwifery training and are willing to enter the service, now that it has been made a reputable calling. (Van Blarcom).(')

SUPERVISION

As far as we have been able to ascertain, most of the supervision of the midwife in this country exists only on paper, and is not put into actual practice. Notable exceptions are to be found in the cities of Philadelphia, Buffalo, Pittsburgh and Providence.

Supervision means not alone the inspector visiting the midwife in the latter's home and checking off the contents of such a bag as she (the midwife) chooses to present for inspection, but it means going to the homes of the midwife's patients and observing the actual condition of mother and child.

That this is entirely practicable, is being demonstrated today in the cities just mentioned, and as far as we are aware, in no others.

Even licensed midwives should be supervised by the local department of health. This supervision to consist of instruction as well as inspection and to be carried on for the purpose of limiting the work of even most highly trained midwives to nursing care, instruction in hygiene of pregnancy, attendance upon normal cases of confinement only, and instruction of the mother in care of her baby.

Quite obviously this instructive supervision involves a knowledge of the condition of the midwife's patients, and this can only be learned through visits to the homes of the patients themselves. Moreover, supervision of this character is made still more effective through conferences with the midwives convened periodically for this purpose. In two or three places in this country, midwife supervisors assemble midwives under their jurisdiction, discuss practical points in their work, and encourage questions and discussion.

This outline of supervision follows closely the system which has been in successful operation for some years in England and New Zealand—two countries conspicuous for their low infant death rate.

A study of the midwife question in England, previously mentioned as made by Miss Van Blarcom, has been used as a basis for recommendations looking toward effective midwife control in this country. It is gratifying to note, that already in a few instances, these recommendations have been adopted in whole or in part.

LICENSING

No unlicensed woman should be permitted to practice midwifery, and only as a temporary measure, should any but properly qualified women be granted a license.

The Advisory Council of the New York State Department of Health empowered by law to regulate the practice of midwifery in New York State outside of New York City, Buffalo and Rochester, amended the Sanitary Code of the State of New York on November 16, 1914, to include a chapter on midwives as follows. The plan of the Department of Health—which the New York Committee for the Prevention of Blindness endorses—comprises:

1. The licensing of all women who call themselves midwives, in order that they may be brought under the supervision of midwife inspectors.

2. After January 1, 1915, the issuing of licenses to those women only who had attended 15 maternity cases and nursed 15 lying-in patients, under the supervision of a physician—this, pending the enactment of laws empowering the Board of Regents to examine and license midwives, and regulate midwife training schools.

3. The adoption of rules and regulations which would limit the work of midwives to attendance upon normal cases only, and nursing of mother and child, these rules and regulations to be enforced by a practical system of supervision which would tend to improve the work of the midwives over their patients.

Since January 1, 1915, the New York State Department of Health has required all midwives to register their name and address with the local registrar of vital statistics, this registration to be repeated annually and upon any change of a midwife's address. Moreover, the State Department has already adopted rules and regulations governing the details of the practice of midwives and has made a beginning toward midwife inspection such as has been described above, having as its object the improvement of those women who were capable of profiting by instruction, and debarring from practice those who were unquestionably a menace to the welfare of mothers and babies.

This action is regarded as the most progressive step thus far taken in this country toward the solution of the midwife problem.

It is frankly acknowledged by those who are interested in this work, that women who have attended 15 maternity cases and nursed 15 lying-in patients as their sole preparation to practice as midwives are far from being adequately trained for this function. It should be understood therefore that this limited and inadequate preparation is accepted only as a temporary provision which forms one link in the

chain which will ultimately provide for adequate midwife control. It must be remembered that in the licensing of doctors, lawyers and all other practitioners, it has been necessary, first, to register all who claim to be practicing the profession in question, and next, to set the standard for admission to practice, which has always been admittedly too low, and which has been almost invariably steadily raised. *Accordingly*, it is hoped that in the not far-distant future there will be on the statute books of the State of New York a law which will permit (a) only those women to practice as midwives who shall have been licensed to practice by a State Board of Examiners appointed by the Regents; (b) licenses to be issued only to those candidates who shall have passed a written and oral examination given by the State Board of Midwife Examiners, and (c) only such women as have graduated from schools for midwives approved by the Regents shall be eligible for this State Board examination. If a law imposing this restriction is passed, it will then be possible to steadily raise the standards of training, examination and licensure until only highly trained women will find it possible to obtain midwife licenses. This will mean the elimination of the unfit and even mediocre practitioners, and leave in the field only a small group who may be regarded as public health nurses.

Within the present year, Miss Grace Abbott, Director of the Immigrants Protective League, Chicago, in the article already referred to, on "The Midwife in Chicago" (6) has presented a study of the training and control of the midwife in that city, and incidentally of several of the other larger cities of the country.

Miss Abbott concludes that "since the licensing of practitioners is a state function, to meet the need of the Chicago situation, an amendment to the statutes containing the following essential features should be obtained :

- (1) Training in a school approved by the State Board of Health.
- (2) Licensing after examination.
- (3) Annual renewal of licenses without cost provided the midwife has observed the rules and regulations of the board.
- (4) Supervision of the practice of midwives.

As Chicago has no school for midwives, requirement I would be of little use. The establishment of such a school would undoubtedly be forthcoming upon the passage of such a law.

As far as New York State is concerned, the School of Midwives at Bellevue Hospital is now in its fifth year and could readily be enlarged to meet almost any requirement.

As far as the practical education of the midwife is concerned, such a School for Midwives as that at Bellevue Hospital could readily be extended and enlarged to meet almost any requirement.

CONCLUSIONS

1. The midwife should have no place in modern medicine or surgery.

2. For the present the elimination of the midwife is an impossibility.

3. The midwife is today a necessary evil, for traditional, social and economic reasons, attending as she does about forty per cent of confinements in this country.

4. Of the three professions—namely, the physician, the trained nurse and the midwife, there should be no attempt to perpetuate the last named, as a separate profession.

5. The midwife should never be regarded as a practitioner, since her only legitimate functions are those of a nurse, plus the attendance on normal deliveries when necessary.

6. The education of previously ignorant and untrained women to be midwives, in courses of three to six months' instruction, is an impossibility.

7. The solution of the midwife question in the rural and outlying districts, is to be found in the inclusion of midwifery service in rural district nursing, should a physician be not available.

8. Control of the education, licensing and annual renewal of license should be in the power of the State Board of Health or State Board of Education. Supervision of the practicing midwife by the local Boards of Health, and annual renewal of license to depend upon the midwife's record for the year.

9. State licenses, State control, high standard of education, annual renewal of license, critical and constant supervision of the midwife; encouragement to trained nurses to take out midwife licenses and further extension of dispensary maternity services, will mitigate the midwife evil, reduce the ranks of the midwife, and render the remaining ones less a menace to the country, and pave the road for their final elimination.

IS THE MIDWIFE A NECESSITY?

J. M. BALDY, M. D., Philadelphia

The question whether or not the midwife is a necessity is one which cannot be answered by a definite yes or no. The whole subject is relative and I presume depends largely upon one's point of view. Theoretically there can be but one opinion; the midwife should be unnecessary. It is just as true that osteopathy, chiropractic, Christian science, massage and other cults of the same kind should be unnecessary but we are faced with the unfortunate fact that these things do exist and further that the community demands them. Midwives have existed over the whole world practically throughout all time and it is more than likely that the midwife will be with us for some time to come. The good to be gotten out of a discussion of this kind is not whether a given thing should exist; but if it does exist and we are unable to get rid of it, the important question is, how can we best deal with it. It would seem to me in deciding the answer to the title of this paper it would be wise to first survey the field as it exists and then decide in view of the facts; not from a theoretic view point.

In the first place I think we can start (with no fear of denial) with the premises, that midwives exist.

This being the case we are faced with two propositions:

First, is it possible to dispense with her?

Second, if we dispense with her what can we substitute sufficiently efficient to take her place.

The midwife exists to a large extent in all countries. She exists quite numerous in our own country. Efforts have been made from time to time to dispense with her. Legal measures have been adopted. For instance in Massachusetts the law pronounced an ultimatum that the midwife shall not exist and yet she does exist, as do most other things in this world which the laws prohibit and the people want. The clear fact that she does exist in Massachusetts in spite of legal prohibition, is proof positive that there is a demand for her services. I know of no other section of the country which has been more suc-

cessful in prohibition than has Massachusetts. The very element of the population which one would expect would be the first to aid in her extinction is the one of all others which defeats the law, namely, the doctors. Individuals from Massachusetts may produce all the statistics they choose, to the effect that the practice of midwifery is limited but one has only to consult her own authorities and to converse with physicians of the State and with lay people familiar with the facts in order to know that there are many cases of women delivered by midwives whose records are covered up by the signature of a doctor. In fact it is stated that the certificate of birth signed by the midwife herself is not infrequently accepted. It takes no great experience for anyone interested in the administration of these matters to understand not only that this is true, but how easily it is done. It is a common thing among doctors of a certain class to use the midwife to forward their own interests. In Pennsylvania for instance we frequently find a doctor charging a midwife twenty-five cents to sign her certificate or charging her a dollar to make a visit for her. She is frequently used as a nurse by the doctor, who after charging the patient ten or fifteen dollars makes a single visit, collects the fee and pays the midwife a few meagre dollars for her share of the work. There are a thousand ways in which such a law may be evaded and Massachusetts has made not even a dent in the direction of prohibition.

Granting that midwives do exist and that the public demands them, which is undeniable, what is offered as a substitute in order to either lessen their numbers or eliminate them entirely?

1. Visiting Dispensaries.
2. Medical School Dispensaries.
3. Doctors.
4. Maternities.

All of these substitutes have existed alongside of midwifery as long as I can personally remember. I have had personal dealings with all of these systems and in spite of all or any of them the midwife still flourishes and competes more than successfully, not only with one of them but with all of them.

The question naturally arises if she competes successfully as to numbers, does she compete in efficiency?

The visiting dispensary is the institution in which I acquired my own early experience in obstetrics. My name was registered as one of the obstetricians, in charge of a certain specified district of one of the largest dispensaries in Philadelphia. Application from this district was made at the dispensary for a doctor to attend a case of confinement. A card was given the applicant, which card contained my name and address. This card was brought to my home and I was summoned to the case. I had little or no experience (in fact was doing this work with the object of obtaining an experience) as was the case with all the rest of my colleagues in the dispensary. I went to the case alone and struggled through as best I might. Can anyone pretend that there was any great degree of efficiency to the patient in that service?

The medical school dispensary is run largely on the same basis. A central office, students assigned to those quarters for a given period, application made by patients' friends and the student sent to the case; it being left largely to his own judgment whether or not he needs or wants a consultant. In the vast majority of cases he does neither. Although a degree better, can anyone pretend that this service is overly efficient?

The class of doctors to whom this class of patients apply are not of a very high order of intelligence and education in the profession and not infrequently have an eye more to remuneration than to efficiency. As a matter of fact our statistics in Philadelphia show that patients are as well off, if not better, in the hands of our midwives than they are in the hands of doctors; as witness 17 maternal deaths and three hundred and sixty-five foetal deaths in a series of about twelve thousand cases. When we began the midwife work in Pennsylvania we felt more than dubious of statements to this effect. Today with definite statistics from the midwife standpoint to compare with our general knowledge of the conditions of medical practice we feel strongly that the comparison results not to the confusion of the midwife if she be properly controlled.

If it could be brought about that the people demanding the services of the midwife, would go to a maternity hospital then the question would be solved. This is largely a matter of time and education and unfortunately from an educational standpoint it is one in which in our country, the beginning is never ended. We have a continuous

influx of foreigners added to our population. These foreigners come from countries and communities where they have been in the habit from time immemorial of employing the midwife and they bring their traditions and customs with them and in their new homes demand the same kind of attention. We may educate the influx of a given year, after a very long time to resort to maternities and to give up the midwife but one has hardly made a beginning in this educational feature before there is a new influx and again a new one, ad infinitum. The one effective way of educating the foreigner to dispense with the midwife and to accept the maternity is to stop immigration and we all know how hopeless is that task. It may cease some day but that will be because the country is too full to absorb more. Therefore we can consider that we have a never-ending in-coming population, many of whom will not go to maternities.

It is easy to gather from what I have already said that I do not believe that the midwife can be entirely eliminated even by legislation. However, I do believe that the midwife evil, if you so choose to call it, may be greatly minimized in two ways.

First, by education and control of the midwife.

Second, by education of their clientele.

However, the very fact of educating the midwife and making her a measurably safe instrument in the community tends to defeat her ultimate entire elimination. If she be made comparatively safe there is danger that her clientele will be more likely to stick to her, at least to those of the midwives who they know are not frowned upon. In other words if the State certifies the midwife and by education and control makes her measurably efficient, a large part of the foreign population will be tempted to turn to this certified midwife because of the fact that her certification would mark her as a safe one to employ. This together with hereditary influences brought by the emigrant to this country would tend to perpetuate the reign of these women. The question largely resolves itself then to the point, should a fight be made to accomplish the almost impossible or should we temporarily accept a lesser evil and recognizing the necessity of this type of practitioner make her as safe as possible. An answer to such a question would naturally be found in the possibility of how safe she could be made. This again brings us on to debatable ground and

there are many opinions as to whether the midwife can or cannot be made a safe factor in the community.

It is held that the comprehensive system of education and so-called control in Germany and England as well as other European countries has proven not only dissatisfactory to the medical profession but inefficient. I am not particularly interested in whether or not such a system is satisfactory to the medical profession. In no true sense can this matter be considered from that viewpoint. This is a matter purely for the best interest of the community and has involved in it an essential matter of humanity and if it be that the material or sentimental interests of my own profession are encroached upon in its proper solution then let it be so. We doctors all know that the medical profession is dissatisfied with a great many good things—that is, good for the community but possibly bad for their own immediate personal and individual interests. Competition never has appealed to many of the medical profession and I am afraid never will. The point that does need serious consideration is, does such a system as is in existence on the continent and in England make for safety and efficiency? I do not believe it does. And when it is assumed that these systems are the best that can be adopted for accomplishing such a result, I very emphatically dissent. There is a great deal in both of these systems which is admirable but they both stop short of the real point—that is efficiency. After all is said and done these systems both leave the ultimate decision as to what the midwife should and should not do, to the midwife herself. They practically leave the decision as to the result of the midwife's work to herself. They both require that she report and her report is accepted off-hand. They both allow more freedom on her part in selection of the cases which she is at liberty to attend than is compatible with safety or efficiency. They both like the ostrich bury their heads in the sand and think they are safe.

In Pennsylvania we have adopted a system of procedure of our own which we believe more efficient and more sure of results than any other system of which we know; a system which is producing statistics which are true and not imaginary, statistics which are compiled at the bedside by medical inspectors who have no interest whatever except to produce and report true results. To begin with, taking Philadelphia as an illustration, because in this district the system is most perfectly developed, the State employs through the Bureau of

Medical Education and Licensure a Supervisor of Midwifery, who is a trained specialist in obstetrics. This Supervisor has at his disposal as inspectors, women graduates in medicine with a special experience in this branch of medicine and who have the additional qualification of command of the various languages of the immigrants. Each midwife receives a certificate which is good for one year only and only good for use in the Philadelphia district. If she leaves the district she must apply for a transfer and be promptly handed over to the district to which she is going. She is allowed to attend only normal cases. She must report to her inspector every labor of a primipara which is of thirty hours standing and it becomes the duty of the inspector to see the case at once. A multipara cannot be in labor more than twenty hours before her case must be reported.

If the mother shows at any time fever or any other symptom, if the child be sick or have sore eyes the inspector must immediately be summoned.

In other words it is not left entirely to the midwife's discretion as to what is and what is not normal. The State officer after the above limit of time decides this point.

The midwife is allowed to perform no operation of any kind except tying the cord. She is called by her inspector to certain central points at stated intervals in order to receive fresh instruction, lectures and demonstrations and is called down into the amphitheatre and made to demonstrate her knowledge of her work. She is re-examined each year and a new certificate is issued her. Within forty-eight hours after each delivery her report card must be in the hands of her inspector and at stated intervals the reports of the inspectors must be in the hands of the supervisor. A quarterly report of the supervisor is furnished the Bureau of Medical Education and Licensure. Every case with rare exception delivered by the midwife is seen by an inspector and conditions as to lacerations and injuries to the mother, fever and any abnormalities are carefully noted and reported. The condition of the child is reported, especial note being taken as to the condition of the eyes and no chance is taken on the word of the midwife. Nor is the inspector a free body. Her reports are checked up carefully by the supervisor and the supervisor's work is overlooked and closely scrutinized by the Bureau itself. The details of this work will be given by others and will be officially

placed on record for the benefit of all who may be interested in this type of work. It would be impossible in a paper of this sort to enter into these details.

We do not believe that any system which leaves a loophole for the midwife to make misstatements as to fact either purposely or through fear or ignorance, is efficient. It is our conviction that a personal inspection by trained medical people of every patient is the only true safeguard.

The inspectors are State officers on salary. They are allowed to practice medicine but only after the State work has been completed and if the State work takes their full time—that is demanded of them. It is impossible for them to shirk this matter because of the constant checkup all along the line. The supervisor can tell at a glance whether or not all the cases have been seen and there is no trouble whatever by a bit of inquiry from the midwives to verify from time to time whether or not the inspectors are doing their duty. A card reporting the occurrence of the labor must contain certain information, answers to questions printed on the card, which can only be obtained at first hand and by personal visitation.

Complicated cases are disposed of by the inspector in three ways. The family is notified that it must call in a physician; the inspector sees that they do this and there is surprisingly little resistance to this matter by the people employing the midwife. When they are notified the case is a complicated one and that a doctor must be called, they rarely refuse. Cases in which the patient is unable to afford the service of a doctor are sent to hospitals and a bit of persuasion is all that is necessary in the majority of cases. In other cases, in emergency, the inspectors themselves give attention to the women. The inspectors are encouraged to do as little personal work of this kind as possible and when they do so are not allowed to accept any remuneration whatever.

Any child with a sore eye demands the attention of a physician and the family is so instructed by the inspector. A smear is taken by the inspector of every suspected case and is sent to the city laboratory. All cases of ophthalmia neonatorum are placed at once in the hands of physicians or sent to hospitals and are not lost sight of until they are completely well.

Recently there was added to the staff of the Philadelphia district

a so-called follow-up inspector. All complicated cases of fever in the mother, sore eyes in the children are at once transferred to her care and it becomes her special duty to follow these cases up to the end, be they in the hands of doctors or be they transferred to hospitals; no chance is taken that either the mother or child be neglected. It is the duty of this particular inspector to continually closely inspect reports in the City Health Department in order to at once detect any midwife attempting to practice, who has not a State certificate. Such a one when found is notified to quit until she has qualified and in case of disobedience is arrested. It is rare that the department fails of conviction. It is also the duty of this particular inspector to give systematic instruction to new midwives coming into the field and who desire to become certified, whether they have certificates from elsewhere or not. We have no school of midwifery in Pennsylvania which is worthy of the name and for lack of funds the department has failed so far in establishing such a school on an efficient footing. Consequently in this respect we are doing the best we can by giving these applicant women such systematic instruction as appears necessary until such time as they show a fair theoretic competency and then send them out with doctors or some of our better certified midwives for practical experience.

Personally I am of the opinion that we should not educate new midwives but should allow of a gradual natural elimination. However, this matter has two sides to it and it is possible if we eliminate the midwife too closely and too quickly that the portion of the community demanding them would again resort to uncertified ones. Consequently for expediency the Bureau has for the time yielded to the opinion of their supervisor.

Like all communities many of our better midwives have come from Continental schools and yet we find even from the best of these schools that they have vastly improved under our system and are becoming more and more efficient. The work of these women is showing progressive improvement from quarter to quarter and it can be distinctly demonstrated that they are largely benefited. The requirements have been enforced gradually, starting with simple details which could be readily understood and readily carried out. As soon as the department became satisfied that each woman was fairly efficient in the requirements given her, new ones were added to her list. For the last six

months or more no midwife has been allowed to attend upon a case except in a laundered uniform. So marked has been the improvement throughout, that that portion of the community which employs midwives will no longer employ one who has not a State certificate; so much have they recognized the difference of the new condition of affairs from the old.

A system of this kind efficiently carried out it would seem to me were far and away better than that of a system of prohibition which in itself is ineffectual and which only brings apparent results.

One of the requirements in Pennsylvania for an approved hospital for internship is that the hospital shall furnish for the interne a minimum six weeks service in obstetrics. The result of this requirement has been the opening by most of the hospitals of the State either of maternity wards or the building of separate maternity buildings. These quarters are invariably filled to overflowing and in many instances are being increased in capacity. Who can tell as yet how far this patronage is being drawn from the midwife's clientele; undoubtedly some and probably a very great deal of it is coming from this source. Consequently as foreseen by the Bureau of Medical Education and Licensure this requirement of the approved hospitals is working not only for the benefit of the poor and the education of the interne but also in no mean degree for the ultimate elimination of the midwife.

To summarize my views:

Theoretically the midwife should not exist.

The time has not come when it is possible to eliminate her. The proper thing is therefore to educate those already in the field and to strictly regulate those in practice. This in itself will lessen their number in a way which even prohibition will not do.

The education of new midwives or the admission of fresh ones coming from other countries is of dubious value.

Hospitals with maternity departments and maternity hospitals should be developed to the point of highest efficiency and this class of patients should be encouraged to go to them for help.

A lessening of the number of midwives by the elimination of the unfit together with the refusal of admission to any or possibly but a few new ones and the placing of ample service of maternity hospitals and maternity wards at the disposal of the community, will go a long way towards eventually doing that which prohibition cannot accomplish in the elimination of the midwife.

PROGRESS TOWARD IDEAL OBSTETRICS

JOSEPH B. DeLEE, M. D., Chicago

I desire to state that I am fundamentally opposed to any movement designed to perpetuate the midwife. These are the grounds.

I. The midwife destroys obstetric ideals. She is a drag on our progress as a science and art.

II. The midwife is not absolutely necessary at the present time.

III. European countries, for centuries, have been trying to bring the midwife up to a tolerable standard and, measured even by their low ideals, have failed miserably.

I. The midwife is a relic of barbarism. In civilized countries the midwife is wrong, has always been wrong. The greatest bar to human progress has been compromise, and the midwife demands a compromise between right and wrong. All admit that the midwife is wrong; it has been proven time and again that it is impossible to make her right—further, a part cannot be equal to the whole, and yet there are those who, crying expediency, are willing to foster and perpetuate this evil.

There is here a struggle between expediency and idealism. The midwife has been a drag on the progress of the science and art of obstetrics. Her existence stunts the one and degrades the other. For many centuries she prevented obstetrics from obtaining any standing at all among the sciences of medicine.

Even after midwifery was practiced by some of the most brilliant men in the profession such practice was held opprobrious and degraded. Less than 100 years ago, in 1825, the great English accoucheur Ramsbotham complained of the low esteem in which he was held by his brother surgeons. He was denied admittance to the Royal College and his colleagues would not dare to be seen talking to him on the street! This opprobrium, to a decided extent, still attaches to the accoucheur and his work. Obstetrics is held in disdain by the pro-

fession and the public. The public reasons correctly. If an uneducated woman of the lowest classes may practice obstetrics, is instructed by the doctors, and licensed by the State, it certainly must require very little knowledge and skill—surely it cannot belong to the science and art of medicine.

Ziegler, of Pittsburgh, says: "Both the teaching and practice of obstetrics are generally regarded as the poorest of all the clinical branches of medicine. There must be a reason for this. The lay public will continue to regard with indifference all pleas for the improvement in the teaching of the practice of obstetrics so long as more than 50 per cent of confinements are in the hands of ignorant, non-medical persons, who, as a class, are regarded as capable of doing the work satisfactorily, even by physicians, among whom are certain well-known professors of obstetrics."

Why should there be a double standard in obstetrics? Is there to be one standard for midwives and one for doctors? Should there be two standards of skill when common sense and science demand only one? Would the surgeons tolerate a renaissance of the cutters for stone? Do the ophthalmologists favor a school for the instruction of optometrists, spectacle fitters? And can anyone deny that the spectacle vendor does much less harm than the midwife? Why not train the chiropractors and Christian Scientists also? They do as much harm as the midwife. An editorial from the Illinois Medical Journal is apropos:

WANTS EQUAL STANDARDS

The committee on medical education of the Illinois Medical Society in its last report calls attention "to the inequitable provision in the Illinois statutes which exacts certain requirements of preliminary education and prescribed medical courses of applicants for medical licensure while practitioners of other systems of healing and midwives are required only to pass an examination, without preliminary educational requirements. It certainly looks like class legislation and legislation which does not conserve the health and lives of the people. If the state board has power under the present practice act, and we think that it has such power, to exact similar educational requirements of other practitioners and midwives, we hereby recommend that this be done, to the end that all licensures shall be placed on an equitable footing."

The medical schools are raising the standards of medical teaching all along the line. Preliminary education, thorough and complete courses in all branches, even a fifth or hospital year, are being demanded. And yet we are to try to educate, in a few months, an ignorant woman up to responsibilities of cases with mortalities which

would stagger the best of surgeons. Is not this a jump backward and should we subscribe to this anomaly, this anachronism in medicine?

The midwife is innocent of the trouble she causes and of the high mortality and morbidity among the mothers and babies. It is not her fault that she is allowed to practice such a delicate profession, carrying such direful responsibilities. If the doctors recognized the dignity of obstetrics she could not exist. Engelman says: "The parturient suffers under the old prejudice that labor is a physiologic act," and the profession entertains the same prejudice, while as a matter of fact, obstetrics has great pathologic dignity—it is a major science, of the same rank as surgery.

Certainly, having babies is a natural process, and, in the intention of nature should be a normal function, yet there is no one here who can deny that it is a destructive one. We all know that even natural deliveries damage both mothers and babies, often and much. If child-bearing is destructive, it is pathogenic, and if it is pathogenic it is pathologic.

I do not have to go far to prove these statements, and will cite only a few facts. That 20,000 women die in the United States every year, during childbirth, is a very conservative estimate. Hundreds of thousands of women date lifelong invalidism from apparently normal confinement, and our local findings are very meager. A few of the less prominent but proven sequences of childbirth are—laceration of the cervix, parametritis postica, chronic metritis, sterility; again—laceration of the perineum, rectocele, pelvic congestion, patulous vulva, chronic infection of the vagina, cervix, uterus, etc.; again—urethro-cystocele, cystitis, ureteritis, pyelitis, nephritis—and combinations of all these, leading to incurable invalidism. Of the more evident damages, prolapse of the uterus, and deviations of this organ may be mentioned, and, let this be emphasized, these admittedly pathologic sequences, not seldom, but often follow so-called *normal* labor.

As for the babies there is a birth mortality of at least 3 per cent in spontaneous deliveries, and there is a larger percentage of brain injuries than can be proven by available statistics.

Thus far I have had in mind only natural deliveries—so-called normal labors. Let us remember the complications of pregnancy and labor, placenta previa, eclampsia, abruptio placentae, ruptura uteri—accidents occurring with startling suddenness and requiring instant

treatment. They have a mortality of from 15 to 80 per cent—as high if not higher than any of the complications of surgery. And we are to trust the prevention of these accidents, these diseases, these deaths to ignorant midwives!

If the profession would realize that parturition, viewed with modern eyes, is no longer a normal function, but that it has imposing pathologic dignity, the midwife would be impossible even of mention. The double standard of obstetric practice would be abandoned.

It is a general complaint of obstetric teachers that young physicians will not adopt obstetrics for their specialty. That the work is hard, that obstetrics is a jealous and exacting mistress, is appreciated, but neither deters the young man, because the science and art of obstetrics are the most interesting and gratifying in medicine. What does deter him, and it may be said without disparagement, is the fact that his arduous labor and sacrifice of time, of comfort and self, are not appreciated and requited with respect and remuneration. These two go together. If the public would acknowledge the dignity of his specialty it would properly remunerate him for his services. If the specialty were as remunerative as the other departments of medicine it would attract to itself a large number of young men. The capable accoucheurs instead of being rare, as now, would be very numerous and the mortality and morbidity of childbearing women would rapidly approach a tolerable minimum.

But as long as the medical profession tolerates that brand of infamy, the midwife, the public will not be brought to realize that there is high art in obstetrics and that it must pay as well for *it* as for surgery. I will not admit that this is a sordid impulse. It is only common justice to labor, self-sacrifice, and skill.

It is generally admitted that more women die during confinement in the hands of doctors than among midwives. * Williams, in his remarkable and epoch-making paper seems to have demonstrated this as the prevalent opinion. The fact that only 40 per cent of the women of the United States employ midwives does not explain the difference. There seems to be actually a larger number. In England, as the result of stricter regulations for the midwives, their mortality decreased, but the total mortality throughout the land remained about the same. Would these, seeming facts, not indicate that the

* Transactions, Second Annual Meeting American Association for Study and Prevention of Infant Mortality, 1911.

standard of practice of the doctors required raising, and would it not also follow that we could save more lives by increasing the number of skillful accoucheurs? The energy directed to the training of midwives would bring greater results if spent on the doctors. This would improve the condition of the 60 per cent—and the 40 per cent would be benefited indirectly, also.

We are asked to educate the midwife as a matter of expediency, to provide a little better care for the poor, the ignorant woman or foreigner, and, we are told, though I do not believe it, that 40 per cent of the women in America *must* have midwives. The 60 per cent employing doctors, are well to do, or at least not paupers—educated, and Americans.

Now, I hope I will not be misunderstood in what I am going to say. I will take second place to no man or woman in my regard for the poor, the ignorant, the foreign born, childbearing mother. Those who know my work among them will bear witness to this. But I have just as high a regard for the well-to-do, the educated and the American woman, and I must raise my voice against a measure which, I am convinced, from 25 years of deep, close, observation and study, will tend to jeopardize her health and her life. While we may, by educating midwives, improve somewhat the condition of the 40 per cent, we will delay progress in ameliorating the evil conditions under which the 60 per cent now exist. For every life saved in the 40 per cent we will lose many more in the 60 per cent.

Ideas and ideals are the hardest things in the world to establish, but once established they are impossible of eradication and they raise the plane of human existence. It is, therefore, worth while to sacrifice everything, including human life, to accomplish the ideal. Witness what is going on in Europe! Knowing this I am willing, for the time, to close my eyes to what the midwives are doing, and establish high ideals. Then all, poor and ignorant, as well as rich and educated—the 40 per cent as well as the 60 per cent will enjoy the benefits of improved conditions.

In all human endeavor improvement begins at the top and slowly percolates down through the masses. One man runs ahead of the crowd and plants a standard, then drives the rest up to it. Search history, biblical and modern, and this fact stands out brilliantly.

Philanthropic workers, everywhere, are convinced that remedial measures, meeting conditions as they exist, only salve the sores of society, and perpetuate the underlying evils.

II. *The Midwife today is not an absolute necessity.* The midwife is slowly disappearing in America. In the rural districts of Illinois she is almost unknown. Dr. A. E. Diller, of Aurora, found some of the counties did not have a single midwife, they were only in the larger towns and cities. The Secretary of the Illinois State Board of Health says that about 1,200 Midwives are registered, of which 900 are in Chicago.

Of the 101 counties in the State of Illinois Dr. Diller received statistics from 87. There were no births registered by midwives in 37 counties, which means that there are no midwives in these counties. Of the 55,187 births registered in the State *outside* of Chicago the past year, 51,832 were registered by doctors and 3,353 by midwives.

There are 201 midwives registered in Indiana, of which 125 are in the larger cities, a few in the rural districts. Statistician Carter of the State Board of Health, considers them dispensable.

Dr. Bracken, of the Minnesota State Board of Health, also considers midwives dispensable and believes it feasible to abolish them. He says they do not practice in country districts, but only among the crowded communities of foreigners.

Dr. G. H. Matson, of Ohio, says that midwives are still employed by foreigners, and not in rural districts. He believes it possible to abolish them.

Dr. St. Clair Drake, of the State Board of Health of Illinois, believes we cannot abolish them and that we should train them.

The subjoined was published in the Journal of the A. M. A.:

COUNTRY PRACTITIONERS PLEASE NOTICE

To the Editor:—The undersigned, for the purposes of a paper on the midwife question in America, is very anxious to get information relative to the number of midwives in country (farming, lumber, mining) districts, in small villages and towns.

Would the doctors in such districts, villages and towns kindly jot down on a postal card answers to the following questions and mail to me?

1. How many midwives practice in your vicinity?
 2. Do you consider the midwives a necessity in your neighborhood?
- Any other information will be gratefully received.

Fifty-one replies were received and I here again thank those physicians who took the trouble to answer the questions. The doctors write

from the following States: Pennsylvania, Virginia, North Dakota, Illinois, Wyoming, Iowa, Arkansas, Ohio, Minnesota, Kentucky, Tennessee, Texas, Indiana, Wisconsin, Vermont, Missouri, Oklahoma, California, West Virginia, Utah, Alabama, Massachusetts, Washington.

Twenty-four doctors say there are no midwives in their vicinity. In El Paso, Texas, 20 to 40 practice among the Mexicans. In North Dakota midwives do not exist in the villages but do practice in the country. Dr. Dach, of Reeder, North Dakota, considers them a necessity as also does Dr. Ames, of Mt. Grove, Missouri, both because of the distances. Dr. Giannini, of Kettle Island, Kentucky, because of the mountainous country, also says they are needed. Of the 51, only 5 physicians say the midwife is necessary; 44 hold her entirely dispensable, two are doubtful. Most of these 44 practice in districts where it is many miles to the doctor and yet they find that they get along without midwives.

From these facts and opinions we may decide that rural districts get along without midwives very well, that these women do not exist in a larger part of the country. It may therefore be said that we do not have to train midwives to care for the rural districts. In the crowded communities, especially industrial centers employing foreigners speaking an alien language, the midwife thrives, but because she thrives we may not conclude she is indispensable. It is exactly in crowded communities that our substitute agencies are able to work with their greatest efficiency.

What has been done to take the midwife's place?

In the larger cities, Boston, New York, Philadelphia, Baltimore, Pittsburgh, Chicago, substitute agencies are supplanting her, and, what is still more hopeful, even the poor foreigner is becoming enlightened as to the value of medical attendance and is demanding it. By supplying midwives we will keep these women longer in their ignorance. The Prenatal Clinics in Boston indicate the marvelous possibilities in this direction. To those unfamiliar with this work the *articles by Dr. Arthur B. Emmons and Miss Mary Beard will prove highly illuminating.

What is being done in Boston is also done in other large cities and can be done in every city, town and village in this country. While

* Transactions, Fifth Annual Meeting American Association for Study and Prevention of Infant Mortality, 1914.

the effort required to accomplish all this will be greater than that to give a few midwives a smattering of obstetric knowledge, the amount of good attained will be immeasurably superior and what is more, it is a permanent improvement in obstetrics—real progress.

Since poverty is given as the cause for the perpetuation of the midwife let us see if there be not some way to eliminate poverty at least as far as childbirth is concerned.

The free maternity hospital will take a certain number—always small however, but still growing each year, as the demand among the people for experienced accoucheurs increases. The number of beds in hospitals for women of moderate means is also increasing rapidly. The free dispensaries—or out-clinics are now caring for a very large percentage of the cases. Accurate statistics are very hard to obtain. I would guess that in Chicago, about one-fifth of the births are cared for by institutions of the dispensary type.

The Peter Bent Brigham hospital allows \$10.00 per case to young physicians.

Why not endowed accoucheurs as there are endowed visiting nurses? The city, the county, the state could well afford to subsidize the accoucheur, if private philanthropy did not assume the burden. Maternity insurance has been suggested, and, if sickness insurance comes into vogue—provision for the maternity case will surely be incorporated.

The visiting nurses do an immense amount of real good in maternity work. They provide a degree of prenatal care that is unrecognized in our journals. They get neighborhood physicians to attend the women during labor while they care for both mother and baby afterward.

There are thousands of young physicians, who would take cases, now cared for by midwives, were it not considered undignified work—and also undignified to accept such a small fee for the service.

In the mining and factory communities physicians employed by the companies can and do care for the wives of many of the workers. With all these agencies at work it is not an unattainable dream to furnish good obstetric care for all women. The midwife can be dispensed with, she is being gradually eliminated. I feel certain that if every midwife in America were to vanish today, before the week ends

every woman in the United States would be cared for—and cared for much better than she is today.

III. It is impossible to train the midwife sufficiently to make her a safe person to attend labor cases.

After what has been said it is superfluous to dilate on this point. Obstetrics is a major science. It requires the highest kind of skill in addition to much knowledge to do even tolerable work. The high class of work and superior knowledge required of the infant welfare nurses, the child saving societies, public health movements, all throw into relief the impossibility of training the midwife for any good purpose.

But all these arguments are unnecessary and insult one's intelligence.

Finally we have the experience of others. Europe has tried to educate midwives for many centuries and has failed signally. Ekstein, of Teplitz, Austria, has been Chairman of the Midwife Committee of the German Gynecologic Society for years. He is editor of a *Midwife's Annual*. He calls the midwife situation in Austria and Germany a state of misery, and envies us our conditions here. I have visited many European clinics and I am convinced that the reason they are so far behind ours in their obstetric technique, is because of the presence of the midwife and the low ideal she establishes.

In Europe the midwife has more standing than she has in this country; the laws she must obey are stricter, they are enforced better than they could possibly be enforced here; she receives a two years' training in the best maternities under the world-famed professors; she has to take post-graduate courses every few years; she is under the direct supervision of the health physicians—and they supervise; and yet an authority on midwives calls the situation miserable!

If the medical profession fails to establish tolerable conditions in Germany, can we hope to succeed? And if we do succeed what have we accomplished? The answer to this question will be found in the foregoing.

I would refer to the paper of Emmons and Huntington,* of Boston, read in Chicago four years ago. Their ideas are identical with mine.

I conclude. I am heart and soul opposed to any measure which is calculated to perpetuate the midwife. In educating her we assume the

* Transactions. Second Annual Meeting American Association for Study and Prevention of Infant Mortality, 1911.

responsibility for her; we lower standards, we prostitute ideals, we compromise with wrong and I for one, refuse to be particeps criminis. We, for the lesser evil, lose the greater good.

Finally she is *not* a necessity. The rural districts are already getting along very well without her. The foreign population of the cities is being taken care of better every year and as their education improves will also learn to do without her.

DISCUSSION

Dr. William R. Nicholson, Philadelphia: I do not desire to appear here as the champion of the midwife. It was a great pleasure to me to be associated with Dr. Baldy in working out the plan for the control of the midwife in Pennsylvania. I believe that I know the conditions in my own county, Philadelphia, pretty well. I should as I am in charge of the work here. Again I desire to insist that I am not an enthusiastic supporter of the midwife. I am rather active in obstetrics and gynecology in three of our large hospitals and it has been my duty and pleasure to organize maternity services and prenatal clinics in two of them, under the rules of the Bureau of Medical Education of Pennsylvania. I simply mention this in order that what I am about to say may have its true value.

I would do away with every midwife in the land tomorrow if it were possible but to my mind this is an absurdity. If we could have a law passed, which at present is impossible, and if we could enforce any such law, which is even more out of the question, we would find ourselves absolutely unable to cope with the cases which would demand attention. The combined charities of this community would be able to care for a large proportion for a week but after that there would be chaos. Before we attempt to do away with the midwife it is imperative that we supply agencies to take her place. Dr. De Lee has definitely defined his position by saying that he is willing to shut his eyes to present conditions with a view to better conditions in the future. I am not willing to do this. The responsibility of the women and their babies rests upon us and we have to work with the means at our disposal. I believe that the midwife is a bridge which we must use at present and probably for a long time to come, and I am not willing to accept the statement of any forty-four doctors from the rural districts that this is not so.

To my mind there is just one solution of this question for the present and that is rigid inspection of midwives. This is what we are doing to the best of our ability. When I say inspect the midwife I mean inspect the work of the midwife. Have each and every one of the cases delivered by her seen by a competent person and have the work, done by each woman, made a matter of record. This is the keynote of our system. I have five women physicians acting as inspectors and during the last twenty-one months there have been 12,977 women delivered by our midwives. Of these cases 11,931 have been inspected. The

reason for the non-inspection of the 1,046 women was that at first we had but three inspectors and it was impossible to cover the ground. Our statistics which I shall now present in brief, are based upon the 11,931 inspected cases.

There were 365 infant deaths from all causes. Not a bad showing when the conditions are taken into consideration and when it is remembered that a considerable percentage were premature.

There was a maternal morbidity of 321 cases. Of these there were 24 cases of sepsis and 54 cases of sapremia.

Physicians delivered 449 of these women besides twenty others who were delivered in various hospitals. Twenty-three mothers and nine babies were taken to hospital after delivery.

There were 455 cases of "sore eyes" reported and twenty-eight cases of ophthalmia neonatorum (one of these refused culture and two were negative to culture).

Seventeen women died and it seems to me to be of interest to state the causes of death. One died from "shock"; one from phlebitis; three deaths were due to eclampsia; five were due to sepsis; one was caused by pneumonia; one caesarianized patient died subsequently of embolism; one died of phthisis pulmonalis; two pulmonary embolism and two of endocarditis.

Dr. Baldy has said that he does not approve of attempting to educate untrained women as midwives but the department of Medical Education of Pennsylvania has made no mandatory ruling and has allowed the Supervisor of each district to try the experiment if he saw fit to do so. I have had a class of eight young, intelligent, English speaking women in training for the past seven months under the charge of one of our inspectors. Five of them have just passed a very creditable examination and in addition have seen ten cases each. We sent them out either with physicians or with the better class of our midwives. I believe that if we could train a certain number of this type of woman we would soon be able to get rid of a large number of undesirable women who are now practicing. In advocating the training of young women to do this work I am anxious that my position in the matter be not misunderstood. I believe that for many years to come we shall have to accept the midwife as a reality and that shutting our eyes to a reality does not make it any the less real. I believe therefore that it is good policy to train a certain small number each year, since by so doing I am certain that we shall be able to control the situation better than in any other way.

I believe that this association could do a very great work in the improvement of obstetric conditions among the poor if its members would get together upon a common platform. In reading over the discussion which has taken place before this body in former years, I have been impressed with the idea that the whole question seems to be whether or not the midwife shall be allowed to continue in practice. I do not think that any one seriously would maintain that the midwife is other than a nuisance and a menace if the comparison is made between her work and that of any well conducted clinic. But this is not a possible comparison since as has been said before we are not in a position to

insist legally that women who are now delivered by midwives shall enter hospital for confinement and moreover if we were enabled to legally so insist we should be embarrassed by our signal inability to obtain beds for any but a very small fraction.

To put the matter in another way, it is not the midwife which should concern this association, she really does not enter into the question at all. Our business is the improvement of obstetric care among the poor and at present we are compelled to work by and through the midwife. The sooner we can evolve a plan which will result in her elimination the better, but such plan is not in evidence as yet and those of us to whom it is not given to be satisfied with the dreaming of dreams and the seeing of visions must continue to attempt to save infected eyes of new-born babies and to prevent sepsis among poor women by the best means at our command. I do not think that I am wrong in believing that at present the best method of improving the obstetric care among the poor is by the rigid inspection of the midwives work.

Dr. J. Whitridge Williams, Baltimore: I have listened to the papers with great interest. The first two midwives that I know anything about are mentioned in the Bible; they were Shiphrah and Puah, the two women for whom Pharaoh sent when he wanted to get rid of the young Israelites. The Bible states further that "God dealt well with the midwives;" and I think He has dealt well with them ever since,—a great deal better than they deserve.

The papers presented give us a great deal to think about. Dr. Edgar gave an interesting account of his attempt to train midwives; he admits that it is impossible to train them in anything like a reasonable time, and I agree with him. Dr. Baldy goes further than that, he admits you cannot train them and does not try. Both of them hope that they will disappear and I hope so too. Another thing Dr. Edgar said was that supervision is necessary. Dr. Baldy *has* supervision. Now I have known Dr. Baldy for a long time, but you cannot get Dr. Baldys in every state, because Dr. Baldy can put the fear of God into everybody with whom he comes in contact; we cannot get such men in Maryland and I doubt if you can get them in New York or in other states. In New York City you cannot get men even to carry out the laws relating to protection from fire. I noticed in the New York Times today that they were complaining that the fire inspectors did not attend to their job. When you come to enforce the supervision of midwives in the big cities, unless we have a man like Dr. Baldy, it is going to be a miserable failure, and the fact that Dr. Baldy has to police these women and that Dr. Edgar says they have got to be policed to make them half-way respectable, begs the question from my point of view. I know that in a city like New York there is a large population with its own peculiar customs and characteristics, and that the midwife is much harder to get rid of these than in cities with a more homogenous population, but I do believe that in a reasonable length of time you can get rid of them, and the less we try to perfect the status of the midwife, the better it will be for the community.

In my opinion one of the greatest advances in modern obstetrics is the development of prenatal care. It does almost as much good as good care at the time of labor. We have delegated people to foster prenatal care and they teach the poor women in their locality to call for such care and the women welcome it. We do not consider that the obstetrical case is ended when the baby is born and the woman is able to get out of bed and do her washing, but we extend the time long beyond that. We must face the condition of the woman afterwards, we must see that she is prepared to nurse her baby and to raise it and that she is kept in condition to have other children and have them safely. Therefore proper obstetrical care implies not only prenatal care, not only care at the time of labor, but supervision of the mother during the months in which she is nursing her child. That cannot be done by ignorant labor; you cannot train them to do it, and the only hope of getting it done properly is to have such work carried on under intelligent medical supervision.

Prenatal care, care at the time of labor and postnatal care is not simply a matter for the obstetrician; it is composite work for the obstetrician, the pediatrician and for the socially trained nurse. These three have to unite and we have to make use of our obstetrical dispensaries, lying-in hospitals, childrens' hospitals and then the various baby-saving agencies. That, to my mind, is the problem, and accordingly obstetrics is not merely delivering the women, as Dr. Nicholson seemed to imply—that is only a small fragment of the work,—and if we are going to face this problem on a broad basis, we have to make a much more extended program.

I have expressed myself on other occasions before this Association as to the crux of the matter; it is the proper education of doctors. We have just begun to understand what an obstetrician is, and he is much more than a man-midwife. The man who invented the obstetrical forceps was named Chamberlen, and he called himself a "man midwife." The greatest obstetrician at the end of the eighteenth century in Great Britain was Dr. Thomas Denman, and on the title page of his book, he designated himself "man midwife and accoucheur of the St. Thomas Hospital." What could you expect from a man whose occupation was man-midwifery? What we need to do is to educate doctors to be competent obstetricians, and the obstetrician is much more than the man who simply delivers the woman. One of the things I objected to in Dr. De Lee's paper was the use of the word accoucheur. I think that is an opprobrious epithet; it comes from "accoucher" and that means to put a woman to bed, and a man who goes around and calls himself a putter to bed of women is a very poor type. I have great regard for Dr. De Lee, and probably when he hears my criticism, he will not use the term in the same way, but a man-midwife and an accoucheur are two things that raise my ire. The man-midwife has disappeared, the accoucheur is disappearing, and what we need is the scientific obstetricians, and we are only going to get him by a great extension of our obstetrical education.

I am in entire sympathy with everything Dr. Baldy has said concerning the interne and the time devoted to obstetrics in medical schools, because the

average doctor in the past had no obstetrical training. I am a professor of obstetrics and what do you think my training was? I had two years of lectures on obstetrics and saw but one patient, and yet I got the obstetrical prize when I graduated. That was 30 years ago; we have gone far beyond that now. Dr. Baldy had very much the same experience; he took a position in an obstetrical dispensary, knowing nothing about obstetrics, to learn by experience with these poor women. Now, Dr. Baldy is asking that the internes, in the first year after graduation, have at least six months' experience in the obstetrical end of the hospital. That requirement is just the beginning. What we want, as I said before, is means for educating students in obstetrics in the broadest sense, and obstetrics in the broadest sense is a very broad subject indeed, and does not consist merely in the putting to bed of women by an accoucheur. What we want are large, properly endowed womens' hospitals, where everything pertaining to women and child-bearing is studied, not only from the point of view of teaching what we know, but of discovering important truths for the future. We are just beginning to get such hospitals. The first institution of the kind in this country which is properly equipped, was opened in Pittsburgh two weeks ago today; that is the Elizabeth Steele Magee Hospital, an institution whose buildings cost \$700,000, and which has an endowment of \$3,500,000. That institution, if properly run, ought to set the pace for other cities. Last year in Boston I understand I hurt the feelings of certain Bostonians by telling them that their provisions for the care of women at the time of labor were antiquated. I can say the same for almost every city, Baltimore as well. I hate to talk about it, but that's what we need, and it strikes me that we have to bear two things in mind— that obstetrics is a broad subject, not merely delivering women, and that obstetrical care should begin when pregnancy begins and should continue until the baby is able to eat ordinary food and the mother is in position to have another baby if she wants to. The second thing is the education of the doctor, and when the bulk of the doctors of this country feel as all intelligent obstetricians do about the subject, there will be no further need to talk about the midwife, because she will have disappeared.

Dr. S. Josephine Baker, New York: Naturally I have a certain diffidence in speaking on this subject, particularly as Dr. Williams has said "There is no Dr. Baldy in New York who can put the fear of God into the hearts of the midwives". I think this so-called "problem" which we have been discussing for the last five years is just about as near solution today as it has ever been, that is, it seems to me that we have failed to get together on the fundamental principles of this whole proposition. Now I think that, as Dr. Nicholson said, those of us who, by virtue of our positions, have to deal with this problem have felt all along that we have been placed in a false position in constantly being referred to as the defenders of the midwife. We have been talked about and we have had the finger of scorn pointed at us because we have insisted upon the fact that at the present time, in our large cities at least, the midwife is a necessity; that the midwife is a condition and not a theory, and that it is necessary to provide some means of dealing with her. In discussing this ques-

tion, I am not willing to take second place to anyone in my dedication to the welfare of babies and their mothers. My interest in the midwife is to make her, as long as we must have her, a person fit to give mothers and babies the care that is essential for their highest welfare.

There is much to be said in favor of the idealistic attitude of Dr. De Lee, that midwives should be abolished, but I think I am simply reiterating Dr. Baldy's and Dr. Nicholson's remarks when I say that it is absolutely impossible to abolish the midwife in our cities at the present time. The situation in regard to their work, particularly in New York (and I think Dr. Nicholson has said the same as regards Philadelphia) has been misinterpreted also. Dr. De Lee speaks of the high morbidity and mortality which follows the work of the midwife. He is, I assume, expressing his personal opinion, but the statistics for New York City, as well as for Philadelphia, do not bear out any such assertion. The morbidity and mortality, both among mothers and babies attended by midwives, are, in most instances, less in proportion to the number of births attended than are found among those attended by physicians. Dr. Williams' contention that the medical student should receive a better education in obstetrics is highly desirable but, in the interim, those of us who are forced to meet this question and deal with the midwife as we find her at the present time are doing, as far as we are able, the thing that seems to us most efficacious and that most nearly protects the mother and the baby.

We come to you frankly, and ask if you can suggest any better method of dealing with this situation. A great many of you say "yes, eliminate the midwife", but "eliminate the midwife" is no answer at all to our question. What we want is a practical working program that is better than the one we have at the present time. As a matter of fact, the midwife is being eliminated. Dr. Edgar told you of the decrease in their number in New York City. We have now only half as many midwives in New York City as we had seven years ago. This is probably the result of that section of the Sanitary Code of the Board of Health of New York City, which makes it impossible at the present time for any new midwife to obtain a permit to practice until she has completed a course of training at the Bellevue Hospital School for Midwives. The elimination of the midwife will come about by making the standards of permissible practice so high that none of the ignorant, untrained women can reach it. This cannot be done in a day; it will be done in ten, fifteen or even, possibly, twenty years, but, inevitably, it will be done and there is no occasion to become academic and to talk about getting rid of the midwives in a day. This is an absolute impossibility. They will practice, whether licensed or not, and the best course is to see that they are at least competent.

I want to speak a word in regard to the prenatal work in connection with the midwife. My experience has been rather contrary to that of the other speakers; we have found the midwives to be one of our best coadjutors and sources of help in our prenatal work in New York City. Probably seventy per cent of the expectant mothers we cared for were referred to us by the midwives, and these midwives seem to be glad and anxious to cooperate with us in

this regard. My experience is that women engage their midwives quite as early as, in the majority of instances, they engage their doctors. I do not believe there is any greater opportunity for the mass of physicians to give prenatal instruction than for the mass of midwives to do so. In our work we care for the mothers through the prenatal period, visit the cases immediately after confinement, and carry on a system of supervision through the first year of the child's life, by means of our infants' milk stations.

I think none of us who have this problem to meet can fail to be tremendously impressed with Dr. Baldy's paper and the wonderful system of midwife supervision which he outlines. From my own experience, however, I must confess that Dr. Baldy either has the ability which Dr. Williams has suggested—that of putting the fear of God into the hearts of these women and making them do anything he wants them to do, or he has an infinitely more complacent set of midwives than we have been able to reach in New York, law or no law. We have met many legal obstacles, such as the opinion of the Corporation Counsel that the city has no right to send an official into the home of the woman while she is being confined unless we have knowledge of some definite wrong-doing on her part, which would warrant our entering the premises. We are therefore trying to accomplish this form of supervision in a different way. We are trying to get the midwives to invite us. They are beginning to cooperate in this way, and we are gradually overcoming that objection.

We hold meetings with the midwives in different localities, for instruction and conference, and the midwife is coming to look upon the authority of the Department of Health, not as something to be combatted and avoided, but as something which has a very definite promise of help for her. We believe that through that kind of cooperation we are going to be able to effect reforms which will be more permanent and more effective than mere drastic legal methods.

I have brought with me a midwife bag which we have devised for the use of midwives in New York City, and which contains simply the articles which are allowed by our rules and regulations. As you see, the bag is lined with washable material, and everything is in plain view. We believe it is compact and useful, and the midwives themselves like it. Indeed, this year, the Midwives' Association is giving one of these bags as a present to the midwife who has delivered the largest number of cases with the fewest casualties during the past year. I shall be glad to leave the bag so that any of you may look it over, if you care to do so.

Dr. H. J. Benz, Pittsburgh: I wish to submit a few statistics as a supplement to Dr. Baldy's paper. For the past nine months I have had charge of the supervision of the midwives in Pittsburgh. We have tabulated the following figures: (Summary of Reports of Deputy Supervisor for Midwifery Supervision of Pittsburgh District for nine months ending September 30, 1915.)

Number delivered	3,258
Primipara	605
Multipara	<u>2,653</u>

Cases not seen because they were out of city..... 67

Delivered by midwives	3,209
Delivered by physicians	45
Self delivery	2
Delivered by husband	1
Delivered by nurse (emergency)	1
	<u>3,258</u>

Delivered at home..... 3,257	Lacerations	43
Delivered at hospital..... 1	Primipara	19
————— 3,258	Multipara	24
	Lacerations repaired	18
Delivered at term..... 3,190	Breast infections	11
Delivered before term.... 68	Ophthalmia neonatorum	19
————— 3,258		

MORTALITY

Mothers..... 2	Babies	92
Cause—pneumonia	Causes:	
	Stillbirths—no cause given....	18
	Stillbirths—due to fall.....	4
	Premature—stillborn	2
	Premature—born alive.....	41
	Pneumonia	5
	Pneumonia (capillary)	1
	Atelectasis	5
	Strangulation by cord around neck	5
	Convulsions	3
	Paralysis—from head injury..	1
	Mother kicked in abdomen....	1
	Syphilis	1
	Inanition	1
	Gastro-enteritis	1
	Abortion	1
	Congenital (heart)	1
	Fractured skull—born, woman standing	1

MORBIDITY CAUSES

In Mothers		In Babies	
Constipation	8	Prematurity	8
Fissured nipples	7	Jaundice	5
Sapremia	6	Constipation	4
Anemia	5	Syphilis	3
Pneumonia	4	Enteritis	3
Epilepsy	4	Cleft palate	3
P. p. hemorrhage	4	Hare lip	3
Jaundice	2	Strabismus	3
Septicemia	2	Bronchitis	2
Varicose veins	2	Eczema	2
Alcoholism	1	Dermatitis	2
A. p. hemorrhage	1	Furunculosis	2
Bronchitis	1	Impetigo	2
Grippe	1	Abscess	1
Phlegmasia	1	Acne	1
Puerperal insanity	1	Adenitis	1
Puerperal dementia	1	Broken wrists	1
Shock	1	Coryza	1
Syphilis	1	Caput succedaneum	1
Thrombosis of femoral vein.....	1	Colic	1
Uterine displacement	1	Enlarged scrotum traumatic....	1
		Erythema	1
	55	Fractured humerus	1
		Hare lip and club foot	1
		Hemorrhage from navel	1
		Mastitis	1
		Navel protruding	1
		Nevus	1
		Pneumococcic conjunctivitis	1
		Phimosis and undescended testi- cle	1
		Retained placenta	1
		Seborrhea	1
		Stomatitis	1
		Tongue tied	1
		Tuberculosis	1
		Webbed toes and fingers.....	1

85

All these cases were examined by fifteen nurses. Every nurse has a district. She visits the home of the mother as soon as a card is received reporting the case. Each midwife is expected to report all births to the office within forty-eight hours. All cases having any defect are reported immediately to the office or a private physician is summoned.

In the first quarter of the year an examination was held and nine midwives out of eighty-eight were suspended. Later in the year there was another one suspended for violation of the rules, i. e., malpractice. Since that time, every midwife who has had any complications which according to our ideas were beyond the ordinary, or, where her work was not up to standard, was called in for consultation, and at the present time a midwife who is called in for such consultation knows that she is under special supervision.

I personally believe the service in Pittsburgh today is fifty per cent better than it was two years ago. The percentage of midwife deliveries in Pittsburgh is thirty per cent of all cases born.

Dr. W. C. Woodward, Washington: It seems to me that we are laying too much stress on the midwife and not enough on the mother and the baby. Our dividing line is certainly on the efficiency of obstetric service generally, and not merely on the service of the midwife. We are dealing too particularly with midwives, and we are dealing with them too much as a class. We must have something with which we can compare their work in order to determine their proper status, and of course a fair comparison is with the medical profession. I agree with what has been said here this afternoon, and with what has been said before, that there is the same need for raising the standard of obstetrics among physicians that there is for raising the standard among midwives, and I believe there is urgent need for statistical control as to the results of the work of both groups. But should we undertake, as the writer of one paper has done, from the fact that 57 or so physicians in various rural parts of the United States report that there are no midwives in those places, to infer that those places can get along well without them. I think we would hardly make a justifiable inference. We must know first what the results are to the mothers and to the babies in those communities.

In the jurisdiction from which I come, the Congress of the United States passed a law in 1896 requiring an examination of the midwives. Since that time the number of deliveries by midwives has fallen from 50 per cent to 9.8 per cent, and there has been a large increase in the number of deliveries in institutions. That of course appears very encouraging, but I was somewhat disappointed recently—somewhat puzzled, and am still somewhat puzzled—on checking up in a rough way the work of the physicians in the homes of the mothers with the work of physicians in hospitals, to find that there was a larger percentage of stillbirths in the hospitals than in the homes. The question is raised, therefore, as to how much good we have accomplished by that transference of cases. We know already the institutions that have higher percentages of stillbirths among the cases delivered. Next year we are going to know not only the institutions that have high percentages of stillbirths, but also the percentages of stillbirths occurring in the practice of each physician and each midwife, in institutions and out of institutions. Of course I know that the percentage of stillbirths does not represent the final criterion as to the efficiency of the institution or of the doctor, but I believe that when we have figures of that kind, by comparing the work of the physicians in institutions and out of institutions, by comparing the work of the physicians practicing among the poor—the physician who is willing to replace a midwife—with the work of a midwife, we will establish a basis upon which to act further with respect to the practice of midwifery among midwives and some basis upon which to urge further improvement in the practice of obstetrics among physicians.

Dr. Arthur B. Emmons, 2nd, Boston: I am always interested in obstetrics, and it seems to me that there are two or three hopeful things—our Chairman wants the hopeful things about obstetrics—and one is, that if you have followed in the last two years the Journal of the American Medical Association, especially what the Council on Education has done, you will have seen they have been “killing medical schools”, as they call it. As a result there has been a diminution in the medical schools of the country by about eight or ten a year, roughly, and much of this “merging” has followed the report by Abraham Flexner, which said there were a hundred and thirty, I think, and that he thought about thirty good schools would supply the country’s need. The result is that the number of medical schools has been reduced very markedly, and greatly to the advantage of medical education. I feel that although the result of this improvement is a distant thing to wait for, better schools and fewer of them, because it means fewer and better doctors, that it is fundamental to the whole problem, the better education of the physician.

The next step which I see rapidly advancing, especially in Pennsylvania, is the State requirement, and of course Pennsylvania, as we all know and as you can see in reviews of the situation, is leading the country today by requiring for licensure a year of hospital work, and that year must be in approved hospitals. Now, in order to be in an approved hospital, you have to offer obstetrical training, and the man is required to have a minimum of weeks of obstetrical work. A man doing this minimum of work in obstetrics will certainly learn some of the dangers, enough to keep many out of obstetrics if they are wise enough, and that is going to be a wonderful thing for the people in Pennsylvania. I do not believe that the rest of the country can lag far behind those advances. As regards Massachusetts; when our Chairman, Dr. Sherwood, was up in Boston, she made the significant remark, after surveying the wonderful sights that we had been showing her in the city of Boston, such as the buildings of the Harvard Medical School and some of the very fine hospitals that we have around it, the Infants’ Hospital, and children’s hospital, a splendid general hospital, a cancer hospital, all of the finest, an animal hospital, and a dental infirmary for children that is a marble palace. *Where is your hospital for obstetrics?* I do not mean to say that there is no hospital in Boston for obstetrics, but that there is no large modern hospital which in any way reaches the level of these other hospitals. We have hospitals in Boston that are doing very good obstetrics, but they are not meeting anywhere near the needs of the City today and I believe that this backwardness in equipment for obstetrics is a good deal the same in many other cities throughout the country.

Dr. George W. Kosmak, New York: I think I am one of that steady company that Dr. Baker referred to a little while ago that attends all these meetings and discusses the papers on the midwife. Now the Association has taken up the midwife question in its section on obstetrics because it believes that that is one of the principal factors in the solution of the great problems with which it is concerned. I beg to differ from the speaker who said that

the question is no nearer a solution now than it was before. I think the admissions that have been made by those who have favored the midwife in her education are enough to show that the attitude which was taken a few years ago is gradually changing, and that those who advocated absolutely the retention or higher education of the midwife have considerably changed their point of view into an admission that this factor in medical practice must be gradually eliminated. Now all the arguments that have been made in favor of the supervision and even the partial education or complete education of the midwife cannot be denied if their ultimate purpose is to do away with any permanency to this form of medical practice. I think that is the essential point to be remembered, that no matter what we do at the present to overcome these conditions, we must not think of retaining the midwife system as a permanent feature in the practice of medicine. The admission was made here, I am glad to say only once—at other meetings I have heard it made a great many times—that the average physician gave less and poorer care to his patients than the average midwife. Now if that statement is true, I think it is a very sorry admission to make, and it is one that we, as a united profession, ought to be thoroughly ashamed of and ought to do everything we can to eliminate such criticism. We have heard a great deal about the supervision which is necessary for the midwife. It seems to me that there is no clearer argument for the ultimate elimination of the midwife than the fact that such police powers are necessary. Now, we, as physicians, certainly do not want to have our actions policed, and if any members of our guild find it necessary to have this done, I think the sooner we get rid of them, the better.

It has been said that the maternity hospitals are filled to overflowing and that they cannot take care of any more patients. I think where the demand occurs, the supply will follow. The demand has not been made on the hospitals. A few years ago I read a paper before this Association at its Cleveland meeting, in which I showed the great advantage that accrued to a woman who was taken care of by our students and nurses and graduate physicians at the Lying-In Hospital. In connection with the expansion of this work, I have noticed that we have an increasing number of applications from classes of foreigners who never applied to us for treatment in previous years. The fact is often mentioned that the Italian woman will not have a man physician, that she insists on having a midwife. I think in New York City that is largely due to the fact that the matter has not been brought to her attention. The number of Italians that have been confined in lying-in hospitals has been increased year by year, as has the number of Hungarians, Poles, Germans and women of all nationalities who are used to the midwife in their home countries and have not become acquainted with the changed conditions in their adopted country. Now, in connection with this subject, reference might be made to the necessity for the better education of the doctor in obstetrics. That point has already been touched upon; in addition to the better education of the doctor, the lay public ought to be better educated. In this connection attention must be drawn to the fact that every time attempts have been made by physicians to educate the lay public, the thing has gone too far

and the lay public have attempted to take up the technical side of the question and develop that to their own satisfaction instead of leaving it to those who know how. That is the case very largely in this work. We have seen that practically exemplified in the recent agitation for "twilight sleep". We find that some of the lay journals, instigated I am very sorry to say by physicians, have taken up the matter of "twilight sleep" and made it appear that those physicians who refused to give this supposed panacea to their patients are ignorant of the matter and do not wish to do the best thing for their patients. It seems to me that we are dealing with the same problem in our work in reference to the midwife; we do not bring the matter properly to the attention of the public. I want to illustrate that further by the contents of a little circular I have which has been issued by one of our leading life insurance companies, of New York City, which has its field largely among the poorer classes of the population, who might be likely to patronize the midwife. Now this company circulates among these people a little pamphlet entitled "Mother, Baby and Midwife", in the pages of which an unthinking woman would readily suppose that the midwife was the equal of the doctor and was acknowledged by him to be his equal and could do as good work. Among other things it states that the visiting midwife visits her patients morning and evening for two or three days after the baby comes, and after that calls for ten days to care for the mother and baby. If that midwife exists in New York, I would like to have her visiting card; I have not found her yet. All this shows that higher standards of education are necessary. I am at heart totally opposed to the retention of the midwife, yet I realize that her elimination is going to be a very difficult matter and the development of substitute agencies is the most important factor in getting rid of her. I regret to say that this matter has not been given a sufficient amount of attention. Substitute agencies in New York today are hardly any better than they were five or ten years ago. I know that at the Lying-in Hospital we do not take care of nearly as many cases as we ought to. I think that if we had applications for twelve or fifteen thousand cases a year instead of six thousand, our Board of Governors would soon find means to supply the desired demand.

Dr. Linsley R. Williams, Deputy Health Commissioner, New York: I want to speak briefly about the conditions that exist in rural communities. Almost every one who has spoken on the subject this afternoon has spoken of the large cities and what has been accomplished and the facilities offered for better obstetrics in those centers. The State of New York has fully 2,500,000 people who live in rural homes and under rural conditions. There are some 500 towns that have an area in square miles amounting to nearly 50,000 where there are perhaps in each one of the 500 towns one, two or three doctors. Those figures are approximate. In these towns it is not possible to have a hospital, it is not possible to have a dispensary; there is no substitute for the home care of obstetrical cases; it is not a feasible proposition, no matter how much you want to do it. It has been said that it is possible, if a sufficient demand is created for obstetricians to look after these cases and that the hos-

pitals will soon come. Now there has been a demand for hospitals for tuberculosis in New York State for a great many years. There has not only been a demand, but there has been a persistent fight on the part of a number of agencies spending \$25,000 a year for the past seven years. We now have 12 hospitals working with cases in them in 12 counties out of 57 counties and in 12 other counties steps have been taken to construct a hospital. In the course of two or three years we will have possibly 40. There is no demand for obstetrical hospitals in the rural districts; no demand for dispensaries. There is a constant demand for good midwives. Some doctors refuse to attend these cases; there is no question about it, they won't go. I personally know of instances where they would not go. If the midwife is not available, the farmer's wife cannot get anyone but the neighboring farmer's wife to look after her, and the doctor's paper this afternoon, which spoke of the conditions existing in rural communities made a very superficial estimate and drew some conclusions entirely unwarranted by the facts. Those conditions are not true. We have to have, for an indefinite number of years to come, midwives in the rural districts at least; in the urban centers, it may be possible to find substitutes for the midwife in the very dim future, but I do not think any of us will live to see conditions which will result in the removal of the midwife problem. It is possible theoretically to conceive of a gigantic scheme of better obstetrics, and I believe that if someone would place in the hands of the State Department of Health about \$50,000 a year for the next ten years, we could create a division of obstetrics and perhaps have Dr. De Lee or Dr. Emmons or some of these gentlemen here today put in charge of it to develop a state-wide obstetrical service to be done by the state and paid for by the state. I think it might be a very beneficial thing for the health of the whole state. I don't think it would be democratic, I don't think it would be wise and I don't think it would be the kind of a thing that anybody expects to accomplish. For myself, I expect to know about midwives as long as I retain my sanity and I expect to find midwives in the State of New York as long as I have anything to do with the state officially and I hope to do my best to see that some system of supervision is developed along the lines Dr. Baldy has given you this afternoon. The midwife is here to stay. I would like to abolish her. I would like to abolish the social evil and a great many other things, but I am afraid that the midwife is here to stay.

The Chairman: The time has come when it is necessary for us to close this very interesting discussion. There will be an opportunity tomorrow afternoon, when the round table for the reception of reports is convened, for others who wish to say something more on this subject to do so. I will ask Dr. Edgar and Dr. Baldy to close the discussion on their papers.

Dr. Edgar: I have very little to add to what I have already stated in the paper. I wish to go on record as being opposed to the midwife, first, last and every time; but we have them here and we have got to reckon with them. I cannot take the attitude that my friend, Dr. De Lee of Chicago, has taken,

and close my eyes to the situation and quietly wait until the elimination of the midwife occurs, because it is going to take a good many years for that to happen, if it ever does occur; and naturally, in a discussion such as we have had this afternoon, there will be differences of opinion, and one difference of opinion is between Dr. Baldy and myself. Dr. Baldy seems to think that the education of the midwife will perpetuate the midwife. My opinion is that the education of the midwife will gradually eliminate the midwife. Of course a difference in opinion is valuable in a discussion like this, and the idea of the education of the midwife and the passing of laws in New York State, from the standpoint there, is to get the midwife's number, so to speak, and find out how many of them we have, and then eventually, if possible, to raise the standard so high that there will be only a few midwives left and it will entice trained nurses who have had some previous medical education, and are better fitted to practice midwifery, to take out licenses. The recent agitation that we have had in New York has already accomplished something, as has been referred to by Dr. Josephine Baker. For instance, in the last few years, the number of midwives has been reduced from three thousand and something to twelve hundred. Another favorable symptom is the attitude of the foreign population, the immigrant population, so-called, which has been referred to by Dr. Kosmak; we have hundreds of hospital records of Bellevue and Manhattan Lying-in Hospital to show that a foreign woman would have a midwife in her first confinement, and for the second, third, four and fifth, they go to the dispensary doctor; that shows the way the wind is blowing. It is not absolutely necessary that we preserve the midwives for the foreign population. As far as the foreign population of New York is concerned, they are quite willing to go to the dispensary doctors in place of the midwives.

Dr. Baldy: I can add little or nothing to what I have already said. There were one or two points brought out in the discussion in regard to which I could say a word. I have never been much of a dreamer; when I have dreamed, it has generally been at night and due to indigestion. I cannot conceive what makes men dream in the day time; and in addition, Chicago is not altogether a dreaming town, but we have certainly had dreams come out of Chicago today.

There was an expression used by Dr. Williams in regard to myself, "putting the fear of God into the minds of these midwives". I have never before associated anything in connection with God in relation to the police courts and jails; it is the police courts and jails that our midwives fear; some of them have been there and we have no compunction in sending them there if they don't behave themselves. Everybody else can do it, there is nothing mysterious about it. I had a letter day before yesterday from Erie County, from our inspector, saying "your instructions were followed in regard to midwife 'so and so.' She has been convicted and will be sentenced this afternoon. We railroaded four midwives in Wimber, a small town about 8,000 or less, outside of Johnstown, in the coal regions of this state, and they were all convicted. The result was a very valuable one, exceedingly valuable in the direction of your

vital statistics". Vital statistics are utterly worthless in this country as they stand; our vital statistics in Pennsylvania are not worth the paper they are written on. In that one town, Wimber, that night there were turned in 25 birth reports; births that never had been reported, and never would have been reported, in a community of six or eight thousand. Multiply that over the state and see what your statistics are worth. This work is invaluable in making your statistics what they never were before. Those are features that go incidentally with this work of taking the midwife and instilling into her mind the fear of God or whatever else it may be.

When we started out, the Board of Health notified us that there were 800 in this town; we have less than 200 now. Many were mythical, and the statistics of the number of midwives are shown by that very instance, as being something of which you have had no real knowledge. When people guess that there are 490 in Massachusetts, I guess that they would find there are that many in Boston alone. Dr. Williams brought out the crux of the whole matter—education of the doctor. We do not get improvements in a day or a week or a month. Many times we are all too impatient, we want to wipe out that which has been inherent in the country ever since the country has been a country, in a day or two. It is an impossibility, and people who work on such a basis never will accomplish any more than this Association has accomplished up to the present time.

ROUND TABLE CONFERENCE ON OBSTETRICS

November 11, 1915, 4.30 p. m.

CHAIRMAN, DR. MARY SHERWOOD, Baltimore

The Chairman: We have met this afternoon to confer together in an informal way on the reports that will be presented, and on the great complex question of obstetrics. We have heard in every meeting some facts that go to show what a tremendous question it is. I am sure that out of the study of the question there will come constructive suggestions which will point to a future of betterment. There is every reason to believe that American obstetrics will some day occupy a very different plane from that which it holds at present. I hope that all who take part in the discussion will point out the avenues of progress that are opening up in the local situations.

REPORTS

NEW ENGLAND SUB-COMMITTEE ON OBSTETRICS

JAMES LINCOLN HUNTINGTON, M. D., Boston, Secretary

There has been little change in the situation in New England during the past twelve months.

In Massachusetts there has been only one new pregnancy clinic established, at the Cambridge Neighborhood House, in cooperation with the Visiting Nurse Association and the Women's Municipal League. All that were in existence at the beginning of the year are more and more active and are either increasing in number of patients or else are improving in the care given the patients. In at least two of the pregnancy clinics a Wassermann test is made as a matter of routine on each patient who applies for treatment. This is done at the pregnancy clinic of the Boston Lying-In Hospital. We have also made a beginning of teaching the students of the Harvard Medical School by having them serve as assistants for a week in the pregnancy clinic,—and during that week nearly a hundred cases will be seen and examined as can be estimated from the following records for the past year.

New applicants for treatment:

Referred from the Hospital.....	526	
Referred from the Out-patient Department.....	1,250	
Referred for consultation from other institutions.....	14	
	<hr/>	1,799
Subsequent visits.....		2,727
First visits of babies.....		20
Subsequent visits.....		16
		<hr/>
Total number of visits.....		4,562
Total number of new patients.....	1,799	
Remaining under observation from previous year.....	268	
	<hr/>	2,067
Subsequently delivered in the Hospital.....	482	
Subsequently delivered in the Out-patient Department.....	1,055	
Not pregnant	16	
Removed from district.....	11	
Discharged to private physicians.....	12	
Ceased attendance or otherwise provided for.....	219	
Consultations from other institutions.....	14	
Remaining under observation.....	306	
Patient died undelivered, waiting.....	1	
Patient died undelivered, O. P. D.....	1	
	<hr/>	2,067

Of the 2,067 women under care of the pregnancy clinic during the year 1914

592 presented the following complications of pregnancy:

Contracted pelves of varying degrees.....	228
Albuminuria without other signs of toxæmia.....	137
Definite symptoms of toxæmia.....	72
Elevated blood pressure without other signs of toxæmia.....	47
Heart lesions.....	41
Ante-partum bleeding.....	17
Miscarriage	5
Acute hydramnios.....	6
Pyelitis	6
Phthisis	4
Syphilis	4
Gonorrhoea	3
Haemorrhoids (giving acute symptoms).....	3
Diabetes	2
Flat foot (acute).....	2
Umbilical hernia.....	2
Congenital malformation of rectum.....	1
Cyst of mammary gland.....	1
Epilepsy	1
Exophthalmic goitre.....	1
Fibroid uterus.....	1
Mastitis	1
Ovarian cyst.....	1
Peritonsillar abscess.....	1
Phlebitis	1
Placenta prævia.....	1
Pruritus vulvae.....	1
Purpura	1
Scarlet fever.....	1

Of the 1,487 women from the pregnancy clinic delivered in the hospital or in the out-patient department there were:

Discharged well.....	1,418
Discharged to private physicians.....	8
Discharged to other institutions.....	3
Deaths	6
Remaining under care.....	52
	<hr/> 1,487

Fall River reports that the pregnancy clinic is growing steadily and that the increase is coming largely from old patients bringing their friends and relatives, which is the most satisfactory form of growth, because it is natural and permanent.

No change in conditions has been reported from Vermont, where no midwives are known to exist, or from New Hampshire or Maine, where the midwives are very few indeed and their activity practically nil.

In Portland, Maine, the obstetric department of the dispensary has shown a steady increase during the past year. It is conducted as a pregnancy clinic and out-patient service, and is under the supervision of the department of obstetrics of the Bowdoin Medical School.

In Connecticut many changes in the methods of teaching obstetrics may be expected, but Dr. Slemmons, the new head of this department, has as yet no formal report to make. The midwife situation remains about the same.

In Rhode Island there has been no marked change, the situation remaining about the same. In Providence one more nurse has been added to the staff, supervising the care of babies delivered by midwives.

REPORT OF SUB-COMMITTEE FOR NEW YORK AND NEW JERSEY

GEORGE W. KOSMAK, M. D., New York, Chairman

As Chairman of the Sub-Committee on Obstetrics, I desire to submit the following report. In view of the fact that the papers to be read at the meeting are devoted to a discussion of the midwife as she exists in the United States today, my report will likewise be devoted to this subject. I would suggest in connection with the same that the question of obstetric teaching in addition be taken up by the various chairmen of the sub-committees as a topic for investigation in their respective reports to the next meeting, or that a separate committee be appointed by the chairman of the section to investigate this subject, principally with a view of determining whether any changes for the better have taken place since the epoch-making report of Dr. J. Whitridge Williams several years ago. An inquiry of this kind would be part of a general movement to improve obstetrics from all standpoints, not only of its practice, but also the preparation for the same.

In summarizing the work of the past year relating to the midwife in the two states of New York and New Jersey, it is possible to cover the subject only in part. Since the Boston meeting of the Association, the New York State Department of Health has continued its work in the organization of midwife activities outside of the larger centers of population, and I regret that no formal report of the same can be made. It is hoped that at the next meeting of the New York State Medical Society a complete statement of the results thus far obtained can be made. The two cities in New York State outside of the metropolis, which have taken up the midwife question in a most satisfactory manner are Syracuse and Rochester, and I am indebted to Drs. F. W. Sears and G. W. Goler, health officers of these cities, for the following facts:

Dr. Sears reports that at present they have 11 licensed midwives in Syracuse and that the general situation has greatly improved since the regulations by the local department of health have been established. Dr. Sears also states that it has been reported to him that certain physicians have acted for unlicensed midwives by signing the birth certificates and that he is at present engaged in investigating this evil.

Dr. Goler, of Rochester, states that no midwives were licensed during the past year and that altogether they have nine practitioners of this kind, but only seven are engaged in business. Two unlicensed midwives have been found. Of the seven practicing midwives, five or six were found to be actually practicing medicine by administering so-called remedies as proved by the contents found in their bags. Of the 6,600 births reported last year, the midwives attended 18 per cent, and this year for the first seven months 3,472 births were reported, of which the midwives attended 16 per cent.

For lack of time no information has been secured from Buffalo or any of the larger towns in New York state. This information is in progress of being collected, and as already stated will probably be reported by the Committee on Midwives of the State Medical Association at its next meeting. The committee just referred to, under the chairmanship of Dr. J. Van Doren Young, held a number of meetings and presented a formal report for recommendation to the last meeting of the New York State Medical Association and at this same meeting held in Buffalo two papers on the midwife question were read by Drs. J. Van Doren Young and Linsly R. Williams, which were very effectively discussed in the open meeting.

The Metropolitan Life Insurance Company of New York State has recently prepared for distribution a pamphlet entitled, "Mother, Baby and Midwife." This pamphlet is evidently addressed to expectant mothers and justifies its circulation by the following statement: "It is best for you to have a good doctor when your baby comes. If you cannot have a good doctor, and must have a midwife, be sure you have a good one. A competent doctor is better." In analyzing this pamphlet the impression is given that a midwife practically fulfills the functions of a physician in childbirth better than the average doctor. This may or may not be true, but it appears to be rather questionable to submit a solution of this question through such a medium as that referred to. I have

yet to find a midwife, who as stated in the circular, will visit her patients night and morning for two or three days after delivery and will make daily calls for eight or ten days to care for the mother and bathe the baby. A midwife who confines from 20 to 30 women a month, as many of them do, certainly cannot give this attention nor is it necessary, yet an unthinking woman in reading this circular would naturally expect such attention. It would seem to me that an organization, such as the Metropolitan Life Insurance Company, which as a matter of common knowledge carries a large amount of infant insurance, would as a matter of self-interest present advice different from that contained in this pamphlet. The question of infant insurance need not be discussed in this connection although generally admitted to be a rather questionable procedure for those classes who are most largely canvassed for such purposes.

The Division of Child Hygiene of the Newark, N. J., Department of Health, has done some very effective work in the midwife situation under the commendable activities of Dr. Julius Levy, the Director of the Division. Dr. Levy states that the midwife practice in Newark, which is a large factory city, is so extensive and so well established that concentrated effort was necessary to restrict midwifery practice to the limits defined by the laws of the state. In November, 1914, the Newark Board of Health provided for the appointment of a supervisor of midwifery practice and this report showed that over 5,000 women, or about one-half of the total births were taken care of by midwives. Ninety-nine midwives were found in active practice, of which 82 were licensed. It was also found that late reports of births were made by 30 midwives and 20 failed to send any birth certificates, that 20 admitted they did not use silver nitrate and 11 were found to carry and administer drugs. Sixteen midwives were found to possess instruments, including syringes, forceps, catheters and specula. Fifty-seven were recorded as dirty in regard to their person, home, or bag, and 70 did not send for a physician when confronted with abnormalities. It was also found that 13 were suspected of doing abortions. Dr. Levy frankly admits that the practice of midwifery (in Newark) will be on as high or as low a level as they permit it to be, and if the Board of Health makes it clear that they are authorized to enforce the law without favor, education and persuasion will be sufficient to induce other midwives to conform to it. Therefore, he claims that education and supervision are essential and that it is necessary to bring midwifery practice to as high a level of efficiency as possible, recognizing at the same time the limitations caused by lack of general training, etc. Dr. Levy claims that the supervisor of midwives has succeeded in getting these women to give the mothers better instruction in prenatal care and to refer abnormal cases to obstetrical clinics or doctors, likewise to call in a physician promptly in the presence of abnormalities and to conform to the other requirements of the law. During the past season a series of lectures on obstetrical subjects for midwives were also given in various languages by local physicians. Dr. Levy is favorably impressed by the progress made, but acknowledges that it would be advisable to establish pregnancy clinics where a physician's advice before labor may be obtained, and also recommends the establishment of an obstetrical out-

patient department in connection with maternity hospitals. Dr. Levy deserves to be commended for the excellent work which he has done in Newark and which apparently has not been followed out in other cities of the state.

Brief as the foregoing report is, it shows that the agitation in regard to the midwife has borne fruit and whether those in charge in different communities believe in the supervision and education of midwives, or whether they believe that these women should be eliminated, it is encouraging to know that at least they are no longer to be considered as more or less undeserving of attention. The Chairman does not pretend in making this report to discuss the pros and cons of the subject, and although he must report progress in the official attention which is now being extended, this progress does not speak necessarily for the permanent retention of these women as factors in the practice of medicine. It seems to the reporter as if we are merely making the best of a make-shift, which, let us hope, may be corrected at some not too distant future time.

REPORT OF SUB-COMMITTEE FOR KENTUCKY

ELISABETH SHAVER, Chairman

It is not possible to express the obstetrical situation in Kentucky in figures because of incomplete registration and records.

In the rural communities there has been no change in the activity of the midwife and of the untrained attendant. The lack of hospital facilities, of competent medical service, of visiting nurses presents a problem for which no solution has been attempted.

In Louisville, the midwife is being supplanted by the Obstetrical Clinic of the Babies' Milk Fund Association and by a somewhat greater use of the hospitals offering free beds. The prejudice against hospital care is being broken down slowly through the influence of the various visiting nurses. To supplement the facilities of the Medical Department of the University of Louisville, the senior students are given the privileges of the Obstetrical Clinic. Two students are assigned to each case; they assist the staff doctor at the delivery, and make daily postpartum visits until the patient is discharged. They are responsible for analysis of urine and for the records taken under supervision of the staff.

The Baby Milk Supply Society of Lexington has recently employed a prenatal nurse to study existing conditions and organize their efforts for obstetrical betterment.

Throughout the state the Kentucky Society for the Prevention of Blindness is waging warfare against both midwife and physician to enforce the newly enacted law for the prevention of blindness, which requires each County Board of Health to arrange for a course of instruction for the physicians, midwives and nurses to teach the best methods for early recognition and treatment of

trachoma and ophthalmia; to furnish to physicians and midwives the simple drugs to be used in preventing and in treating such diseases; making trachoma and ophthalmia reportable diseases in the Commonwealth of Kentucky.

**WHAT SAN FRANCISCO OFFERS IN CARE WHICH MAY BE CONSIDERED
AS SUBSTITUTE AGENCIES FOR THE MIDWIFE**

**ADELAIDE BROWN, M. D., San Francisco, Chairman, Sub-Committee for
California**

Leland Stanford Medical Department

Has a well organized maternity department, associated with it social service, prenatal nurse, medical chief of out-patient service.

The hospital beds: 12 free, 12 at \$28 for 12 days' care, including medical care.

Out-patient averages 12 to 18 cases a month. Attended by two students and a nurse. Chief of out-patient service reported to in each case.

Case engages care at clinic, is examined and reports every two weeks. Prenatal nurse follows her up. Confinement care is for 10 days. Postnatal call at clinic with baby a month old.

Hospital beds average 30 cases a month. Patients come through other cases to hospital and clinic.

Medical Department University of California

Cases taken free if cannot pay. Eighteen beds. Charge is \$45 for two weeks care and delivery. Prenatal and social service care to out-patient cases. One student and nurse on case.

San Francisco Hospital

(City and County.) Twenty-two maternity beds. Charge \$1.50 a day (if possible). Average 14 cases a month.

Hahnemann Hospital

\$10 a week. 15 to 20 beds. Doctor's fee extra.

Alexander Hospital

Children's Hospital. \$50 for 2 weeks, includes medical care and laundry for baby.

French Hospital

(Only to members of Society) \$2 a day, \$10 for delivery room. Extra for doctor.

German Hospital

(German Benevolent Society; does not include maternity bed.) 5 bed ward. \$40 for 2 weeks, includes delivery.

Mary's Help Hospital

No free beds. 10 beds at \$15 a week. 5 beds at \$25 a week. \$10 for delivery room. Extra for doctor.

St. Luke's Hospital

6 bed ward at \$20 a week. 2 private rooms at \$25 a week.

Conclusions

If willing to be clinical material women can get excellent care at the University Hospitals or in their own homes as out-patient cases. For wage-earners of moderate means, hospitals offer prices varying from \$10 a week to \$15 with the physician's price added or an average for the case of \$45 to \$50 for 2 weeks' care.

One hospital offers medical care and 2 weeks' care for \$50, where no students are present.

Meanwhile the number of cases confined by midwives has increased the past year.

Except at the Stanford Medical School, the Medical Department of the University of California and the Alexander Maternity no prenatal work is done, the private physician having charge of the case in all other hospitals. The cases at the San Francisco Hospital are usually emergency cases.

There is no doubt but that the work of the last ten years in connection with the modern teaching of obstetrics in the medical schools has influenced the standard of obstetrical work in this part of the state.

The work of the San Francisco Maternity, now auxiliary to Stanford University Medical Department, has brought to the women in their homes modern obstetrical care and to the student both in medicine and nursing, practical experience in the work which has elevated medical standards.

There still remains unsolved the gap in price between \$40 to \$50 and (not teaching material) \$15 charged by the midwife.

Is better care to be counted at this value or is there room for a \$7 a week hospital bed and a smaller obstetrical fee?

Or can it be better solved by a better control of the midwife?

I wish to acknowledge the work of Mrs. Philip Pearson in collecting data for this report.

A REPORT ON THE MIDWIFE SITUATION IN SAN FRANCISCO AND ALAMEDA COUNTIES, CALIFORNIA

This report is based on a study of the midwife situation from August 1913-1914 and from August 1914-1915 from registrations at the Board of Health.

Aug. 1913-14 82 midwife registered cases.

Aug. 1914-15 81 midwife registered cases.

54 names appear on both lists.

Of those appearing for the first time in 1914-15, 24 registered under 5 cases and 12 of these only one case.

In 1913-14 18 Italians registered 732 cases.

1914-15 17 Italians registered 751 cases.

In 1913-14 3 Japanese registered 116 cases.

1914-15 6 Japanese registered 226 cases.

Of a total of 1,320 in 1914-15, 977 or 74 per cent are registered by these two nationalities.

In 1913-14 29 midwives reported 10 or more than 10 cases apiece.

In 1915 29 midwives reported 10 cases apiece.

In 1913-14 50 of these midwives were interviewed and data collected according to the "card" of the midwifery committee.

Only 3 midwives were found doing work and not recording cases.

All midwives established would prefer registration of some sort.

The average fee is \$15 to \$20, some taking \$10 when they cannot get \$20 or \$15.

The living is precarious. Of 33 midwives in the 1913-14 list registering 80 per cent of births recorded by midwives only 13 record over 30 each at \$15 apiece; 30 births gives an annual income of \$450 and \$416 is considered minimum wage or \$8 a week.

The problem is one of immigration—custom influences the foreign woman.

The Japanese midwives are well-trained, a two year course being required in the University of Tokio.

For the past two years no death from puerperal septicemia is recorded which traces back to a midwife's registration. 13 deaths were recorded this past year.

The economic question is the other side of the problem. Are we offering any equivalent for what the midwife offers?

1. Care at home.

2. Care of mother and baby, nursing visit daily and delivery at \$15 for ten days.

3. A feeling of independence and self-respect—shattered by charity care at home under obstetrical clinics and by giving free beds at hospitals.

In Los Angeles midwives have been examined and registered for 20 years. The babies are followed up by a welfare nurse.

In Oakland, Alameda and Berkeley conditions are as in San Francisco. No registration, and Japanese and Italian midwives recording the majority of the cases.

Hawaiian Islands

In the Hawaiian Islands no control of midwives exists. The report of the Secretary of the Territorial Board of Health is as follows:

In response to your inquiry relative to midwifery in this Territory I would state that we have no laws controlling midwives or their practice, hence those who operate here are not registered. We are aware that a number are being employed, but as we have no record of them we cannot state definitely how many are practicing.

There are no schools for the training of Hawaiian women in midwifery in the Territory. We know of no recognized branch of training being employed by those practicing here.

Among the Hawaiians, only a small proportion of births are attended by a physician, for they never call a physician unless labor is abnormal.

Among the Japanese, confinements are almost always attended by a so-called Japanese midwife, some of whom have certificates from a school in Japan. We are not informed as to the control of midwives in Japan.

The matter of the practice of midwives has been considered by this Board, but owing to the peculiar conditions which exist here no satisfactory solution of the question has been attained; however, the matter is still being discussed in the hope of arriving at some solution of the problem of the control and practice.

Philippine Islands

Plans for the establishment of a school for midwives were reported by the Acting Director of the Bureau of Health of the Philippine Islands, as follows:

While courses in obstetrics are given in connection with the training of nurses at several nurses' training schools in Manila, no school exists for the specific training of midwives. A plan is now under way, and it is hoped that it may be placed in operation at the beginning of the coming year, whereby a school for midwives with an entrance of 300 will be inaugurated in connection with the College of Medicine and Surgery of the University of the Philippines.

Foreign midwives could be registered, but since practically all the European and American obstetrical cases are cared for at hospitals, and since it is not believed the Filipinos would avail themselves of the services of a foreign midwife to any great extent, it is not believed it would pay a foreign midwife to begin practice here.

It is regretted that this office has no information with reference to the situation with regard to this matter in China or Japan.

Japan

The law of Japan regulating the practice of midwives has been translated for us, as follows, by Mr. Y. Numano, Acting Consul General of Japan at San Francisco. He wrote that most of the women who follow this occupation are graduates of the Medical Department of the Imperial Universities of Tokyo or have had training in other recognized schools.

Only those who have passed the Government examination for midwife and who are twenty years old or older, are permitted to practice midwifery.

Students are required to complete a one-year's course before they are eligible for the Government examination.

Midwives are under the supervision of local authorities.

Midwives are not allowed to give medical treatment and medicine to either mother or infant. When they notice any indication of disease or sickness, they should call the doctor.

Every midwife should be registered with the local authorities.

After three years from the date of registration, if any midwife does not practice midwifery, her name will be removed from the registry.

Any midwife who practices without license or without registration, or after her suspension or after cancellation from the registry, is liable to a fine of fifty dollars.

To obtain a license for midwifery, both theoretical and practical examinations are undergone.

Any who wish to be examined for license to practice must show either a diploma of a school for midwives or a certificate of training endorsed by a licensed midwife or two physicians.

My own conclusion is that the midwife is a present necessity.

That she should be registered and licensed every year, and the baby in each case given visiting care by the Board of Health "welfare" nurse, a part of the midwife bureau.

That one should encourage doctors practicing in poorer quarters to bring operative obstetrics to university hospitals and the obstetrical departments of such hospitals should stand ready to counsel and guide the care of such cases, but should not take them out of the hands of the original doctor. This gives

the patient the advantage of the modern hospital care, improves the type of obstetrical work done among the poor and will react on the type of medical person attending such work. Younger medical people should be encouraged by clinical positions to take cheaper obstetrical work.

That we must sooner or later train a second type of nurse attendant, trained practical or whatever the grade may be called—to be able to care for house and patient at a reasonable rate—\$12 to \$15 a week.

The crying need today is "help in the home" in sickness. The hospital care suits the primipara, but is less easy to arrange for with later confinements.

In making this report I wish to thank Mrs. Elwyn Stebbins, A. C. A. Baby Hygiene Com.; Miss Johnson, Miss Newman, Dr. Ruby Cunningham, Dr. Richard Brodrick, Dr. Hassler and Mrs. Turner, of the San Francisco Board of Health, for their cordial cooperation at every point.

SUPPLEMENTAL REPORT ON THE MIDWIVES OF OAKLAND, ALAMEDA AND BERKELEY

Prepared by MRS. ELWYN STEBBINS

Lists of midwives practicing in these towns were obtained from the birth certificates for 1914, on file in the Health Office of each city. The midwives registering five births or over were then visited, and as complete information as possible obtained with respect to character, ability and training. While incomplete, because not every midwife registering births was investigated, and because it is probable that other so-called midwives exist who do not register their births, and so cannot be reached, the investigation has covered the more salient features of the midwifery situation; what we may term the casual midwife—who occasionally assists at the birth of a child, and who does not register more than from one to four births a year, is along with the woman who does not obey the law concerning birth registration, really outside the purpose of an investigation which aims to examine midwifery as a recognized business. Any legal regulation of midwifery will, as far as the law is enforced, effectually dispose of the activities of this type of midwife.

In Oakland out of a total of 3025 births, 329 or 10 per cent were registered by midwives. Of these more than half were registered by four midwives, all graduates of foreign schools with two years obstetrical training—one Japanese, with 58 births; one Italian, with 63; another Italian, with 20; and a Swedish woman, with 22. Of the remaining 156 births registered by midwives, 37 were registered by two Italian women, who had had no professional training, but who would probably be entitled to practice under a regulation such as the New York law, being fairly intelligent, experienced and impressed with the importance of asepsis, and the necessity for calling a physician in difficulty. Twenty-two births were registered by an Italian midwife of no professional training, and with a very bad record for abortion, carelessness and over-

confidence. Five more births were accounted for by a Finnish midwife with a diploma from Helsingfors; eight by a Scotch woman, a graduate of the Royal Institute for Midwifery in Edinburgh. These women had probably been well trained according to the standards of their day; diplomas dated from about 1872. Several others were registered by midwives from San Francisco, Berkeley and Alameda. The rest were scattered, a large number registering only one birth.

In Berkeley, out of 812 births, 103, about 12 per cent. were registered by midwives. Of these more than half were registered by two Japanese midwives and a Finnish midwife. One of the Japanese women, was the one I had already investigated in Oakland, the other was a graduate of the University of Kioto with the two years' training. The Finnish woman had a diploma from the Government School at Helsingfors. The other births in Berkeley were credited to midwives previously visited in Oakland, a few from San Francisco, and a number who registered only one or two births.

Similar conditions were found in Alameda, where out of 415 births, 52, or over 12 per cent, were registered by midwives, and of these more than two-thirds by trained midwives with diplomas for two years' work.

To summarize the foregoing facts, we find:

First.—That our midwifery situation on this side of the bay is very largely confined to the foreign population, principally Italian and Japanese.

Second.—That over 50 per cent of the births registered by midwives are in the hands of five or six midwives, who have had two years' training in good schools, and who have in consequence of this training, and as a result their large practice, that experience which is one of the necessities for good obstetrics.

Third.—That with one exception, these women are under 33 years of age, and hold diplomas of as recent date as 1901-3, indicating that they are abreast with the more modern theory and practice of obstetrics. These young women were the only ones of all the midwives investigated who understood prophylactic treatment of gonorrheal ophthalmia, and habitually used argyrol or nitrate of silver in the eyes of the new-born infant.

The fees asked by midwives varied from \$10.00 to \$20.00, and this amount covered not only attendance in labor, but daily nursing care for mother and child during the lying-in period of 10 to 14 days. Fifteen dollars was the usual fee asked by the more professional midwives.

PROVISION FOR OBSTETRICAL CLINICS

The College of Medicine in Oakland has an obstetrical clinic; women attended by senior students; no fee.

The Baby Hospital has a prenatal clinic in connection with baby clinic. Women go to clinic for care and instruction, are visited by clinic nurses and staff physicians when necessary, have the loan of complete kit from clinic, and are attended by staff physicians at time of confinement. Fee according to means of patient. No accommodations for hospital care as yet. One hundred and ten cases cared for in past year.

EXTENT TO WHICH MATERNITY HOSPITAL CARE IS AVAILABLE FOR WOMEN
OF MODERATE MEANS; FOR THOSE UNABLE TO PAY

One Catholic hospital has two wards, four beds each, charge \$15 a week,—\$10 for delivery room. One maternity home charges \$15 a week. City and County Hospital gives both hospital and medical care—period 15 to 20 days—no fee; took care of 24 cases from June, 1914 to December, 1914. Occasionally hospitals will take maternity cases in free beds, but this is not frequent, maternity care interfering with routine.

CONNECTION BETWEEN OBSTETRICAL CLINICS AND BABY-SAVING ASSOCIATIONS
OR VISITING NURSING; PRENATAL CARE

The only work of this sort done in the County is done by West Berkeley Dispensary and Baby Hospital. In these cases prospective mothers go to the clinics and are visited at home.

EFFECT OF PRENATAL CARE

The nurses in charge of Baby Hospital Prenatal Clinic report many cases formerly confined by midwives.

It is not within the scope of this report to discuss the arguments for and against the existence of midwives. The fact is that they do exist and that they appear to meet a very real social and economic need. A State-wide system of examination, license and supervision, while it would not be entirely effective—few legal means are—would yet meet the more serious difficulties of the present situation, as it is found in these bay cities, and doubtless elsewhere: it would place those midwives whose ignorance and carelessness are a menace to the community, outside the pale of the law, and give to the well-trained and competent a secure basis for their work.

DISCUSSION

Dr. Gavin S. Fulton, Louisville: I listened to all the papers yesterday with the greatest degree of interest and was more impressed by what the essayists failed to say than by everything they did say, and to my mind the interspaces of those three papers cried out loudly one thing, an arraignment—a terrible arraignment—against the incompetence, and, worse still, against the criminal indifference of the profession (myself and the other doctors who are here and elsewhere) in regard to the obstetrical situation. The gist of the papers seemed to be whether we should have midwives or not and that, in my opinion, is not the question at all.

Dr. Williams struck the keynote and told the story in a few words when he said the doctors are primarily responsible. That is the whole story. Now, if we doctors as a profession believe that anybody can do obstetrics: if the professors, the men who are teaching obstetrics and the men who are doing obstetrics go around in a hap-hazard way and smile upon the indifferent work that is done, we can not get anywhere no matter how high the standard of requirements in the schools may be raised.

There are many localities (Kentucky is one of them) where there is not so much of the midwife question. In cities with a small percentage of foreign born people, the midwife question plays a small part. We have \$5 doctors and medical students, a combination as bad as all the midwives you can put together and we are trying to do something to overcome that. The middle-class people, people of small means, artisans and laborers, cannot pay for good obstetrics. It certainly is true that only the rich and the very poor can get good obstetrics under the present conditions..

That is all wrong and we are trying in Louisville in a very simple, modest way to do what we can toward furnishing a substitute in a dangerous obstetrical situation. We realize that where you may find a good surgeon, a good internist, pathologist, bacteriologist, you may be least apt to find a good obstetrician: it is the people who suffer—and the doctors who are at fault.

Since September, 1913, the obstetrical department of the Babies Milk Fund Association has practiced good obstetrics with very little money indeed. We have a medical director, a staff and an obstetrical nurse who does the prenatal teaching and serves as postnatal nurse up to the tenth or twelfth day or to the end of the second week according to the requirements of the individual case. Everybody is unpaid with the exception of the nurse. We find good obstetricians who like to be connected with the Association but who do not always like to do the work and we haven't the money to offer as salary to men who really are responsible and could do the work and who as a paid staff would be absolutely under control of the Association. We can not get to that point until we have money enough to pay those men; but it has been possible to practice good obstetrics, in this humble way, without maternal death, without mutilation or damage that could result in invalidism and without ophthalmia neonatorum.

Just one word in closing: I say again that the trouble is with the doctors—and how are we going to get anywhere if the doctors themselves do not believe in adequate teaching and control of obstetrics? I am not mentioning names of schools but there are numbers of schools where the requirement is raised to the point where each student must see six or eight cases! How can any student learn obstetrics by looking on while six cases are delivered? One school offers \$5 to any doctor, no matter how incompetent, who will take two students with him—or who allows the students to go alone to deliver without supervision and without clinical teaching.

How can obstetrics be taught that way? It is not the midwife, it is not the \$5 doctor, although he is a terror, it is the fact that the teaching profession and those of us who are trying to solve this problem don't get down and acknowledge our own ignorance and take up our share of the responsibility.

We can do the work, we can right the wrong, if we start with these simple methods I am suggesting. If we had money enough in our Association in Louisville to have a sufficient number of responsible men on call all the time we wouldn't have any midwives or \$5 doctors or unrestricted medical students.

The Chairman: Mrs. Morton, will you tell us something more about the Louisville Clinic?

Mrs. David Morton, Louisville: I have very little to add to what Dr. Fulton has said. I am neither a doctor or a nurse, but I believe if we could educate the people, the laity, they would very quickly want the best obstetrics and the question of the midwife and the \$5 doctor would be forced out of consideration by the mothers themselves. We have found in Louisville that the mothers who have come to the clinic and have found out what good obstetrics was, have wanted it right along and have sent their friends to the clinic.

Perhaps you have heard about the moonlight schools that have been started in our Kentucky mountains. In connection with the academic courses given in these schools medical instruction has been given to the girls, young boys and mothers. A few doctors and trained nurses have gone into the homes and have taken up the question of obstetrics to a small extent only, but we have found that the minute the mothers know anything about proper obstetrics they don't want anything else. I think this shows that given even a small amount of education the mother will demand the best, and will get it I believe by forcing the doctors up to a higher standard.

The Chairman: That last word indicates one of the lines along which reform must go, and that is the part of the women who get any knowledge of the needs of the situation, for better obstetrics. It is interesting in that connection, too, to note that in one city, the city of Chicago, a large association has been formed of lay women who have banded themselves together with the object of circularizing medical schools and demanding that obstetrics be better taught. They present the facts upon which they base their demand, the statistics of a number of cases that the average medical student sees before he is turned out to practise obstetrics, and they make a very strong plea, and I think if we could see such work as that started in other places, we would very soon see progress toward better obstetrics. Mrs. Putnam, haven't you something to tell us?

Mrs. Wm. Lowell Putnam, Boston: I wanted to add to what Mrs. Morton said a word from a point of view which I don't think is very often considered, that of the woman who has herself borne children. We hear a great deal from doctors and from nurses and from social workers, but we hear very little from the woman who has herself been there. Now, I speak from the point of view of one who has borne not one child, but several, and I know that we must have the best care, that any woman who has ordinary intelligence will be dissatisfied with anything but the best for her child, regardless though she may be of herself. She may do anything she chooses to risk her own life, but she will demand for the child whom she is to bring into the world, the very best opportunity for his whole future, knowing that it may be absolutely wrecked at birth. The moment of birth is absolutely the most important time in anybody's life. Far from being able to regard obstetrics as it used to be

considered, the lowest branch of surgery, it seems to me to be the highest, for it is the only time that the surgeon has two lives, and perhaps more, in his keeping, and the reason I think that we do not so consider it, is two-fold; in the first place, it is natural; children have always been born, and most of them, on the whole, have survived or there would not be the world that there is today; consequently, we forget the great numbers who do not survive or who—and this seems worse—survive, crippled for life. The other thing that makes bad obstetrics possible and makes it regarded as inferior surgery is ignorance and lack of imagination. In the case of sickness in an acutely ill person or a person who must be operated on, or who has to have a leg amputated or an appendix removed, or whatever it may be, you see immediately before you the matter of life and death, and the surgeon who can perform the evident feat of saving life is looked upon, because the laity can see the issue, as something finer than the man who can bring into the world safe and sound a child who might have been born all right without his help—but who, on the other hand, might have been ruined utterly had he not known how to make its safe entrance into life possible.

Obstetrics seems to me to be, I might say, really a branch of preventive medicine, and in that way, I believe it should be taken up by Boards of Health, as one of the greatest lines of preventive medicine. If that were done, I think we should have much less trouble with the whole midwife situation, because it would sink into insignificance when obstetrics, proper obstetrics, was demanded. In order to give the proper training to obstetricians they must have the clinical material, and if they have this material the demand for the midwife will cease to exist.

There are two ways of approaching a subject. You can approach it from the bottom or from the top; in fact, on any rung of the ladder. We have been hearing more or less of approaching this subject from the bottom. My own belief is that things work morally by means of gravitation just as they do physically, and that if you approach a thing from the top, you get a great deal better result than if you approach it from the bottom; get the top right and the bottom will take care of itself.

Dr. Arthur B. Emmons, 2nd, Boston: I had the privilege of presenting a paper at the meeting of this Association in Chicago in 1911 on the midwife situation. Since that time I have had occasion to think about and see very little of the midwife, because at that meeting I was convinced that the answer to the midwife problem was some substitute for her. Since that time I have been spending my energies in trying to find some way to make that substitution. I feel perfectly satisfied to leave the midwife with Dr. Edgar and Dr. Baldy.

It seems to me that we are all agreed here so far as the midwife is concerned, that what we want is a broad program on how to give the public good obstetrics. My answer to that—and I represent one idea which I have tried to follow, was adapted to conditions in Boston. We hear very little of the midwife there; in fact one of the Health Officers told me a year or so ago that

he had names of all the midwives in Boston and that in 24 hours we could have them all under lock and key if we wanted it. He knew very well that we were not interested in anything of that sort and that the laws of Massachusetts do not attempt actively to eliminate the midwife in any way—and I wish to correct the impression, that in Massachusetts there is little or nothing being done, practically, to eliminate the midwife direct. The only law we have is that which registers physicians and allows those to practise medicine who are qualified according to the examination of the Boards of Licensure. If a midwife should come up to the Board of Registration and should want to qualify, she would have to pass the standard examination. It is interesting to note that the daughter of one midwife has already done that, has taken a course in medicine and qualified as a physician. That is one answer to what may be done to preserve the high standard. She is an Italian.

What I wish to speak of particularly is what we are trying to do in Boston. I found there were a number of graduates of the Lying-in Hospital who were in wealthy districts of the city, who were perfectly willing and anxious to do obstetrics, that there were large sections of the city where midwives and poorly trained physicians were doing all the obstetrics and doing it none too well. It seemed to me that we had the need and we had the men, but there was nothing to bring them together. My attempt was to bring them together. I have been working at what we call pre-natal clinics with the idea that that was one way of accomplishing it.

We have worked in close connection with the milk stations, the mothers' conferences, and in that way we have the confidence of the patients. We have a physician who receives \$5, or \$10, depending on the section in which he is working, and that amount is guaranteed him for taking care of an obstetric case. The prenatal examinations are made with this physician present at the clinic and then the woman is cared for in her home and the follow up work done by the Nursing Association. I am satisfied with our results from a medical point of view, and offer this as one possible solution.

I wish to add that one of my objects was to work out the solution of the problem not in connection with a medical school using students, but using graduates in medicine, so that the plan could be adopted in other parts of the country where no medical school exists.

I am very much interested in Dr. Baker's work with the New York midwife. I think there is no question that we all have the greatest respect for the large amount of good Dr. Baker has accomplished, but she just now seemed to imply that nothing else in the country is being done to solve the problem successfully. I put forward my little idea as only one of many things that are being done.

I have been in Philadelphia two days, and during that time I have seen a great many things being done. I am ready to leave the midwife to Dr. Baldy, but I am keenly interested in what is being done here in two different ways, one of which Dr. Baldy has spoken of. The Pennsylvania State Board of Health requires before licensure a year of hospital work, and Pennsylvania is leading this country in the requirements for obtaining licensure. The direct

result is that every new doctor will have to know a certain amount of obstetrics, which will be a large amount, more than the ordinary doctor knows at present.

Massachusetts, on the other hand, I may say, is at the other end of the line and has only during the past year succeeded in requiring a medical degree, much less a year in the hospital. In Boston I should say our problem was not the midwife but the poorly trained doctor, the doctor who has not had that opportunity before he registered as a doctor; it was not required, in fact.

The other thing which I have found of greatest importance to me in Philadelphia is a health center where the most intensive work is being done. I wish to call special attention to what Dr. Hamill and others are doing in this health center. I believe that it is getting at the root of the matter, public health, because it does not take up the milk station question or the pre-natal work or any one thing in particular, but it does take up the home in particular.

Dr. Lee K. Frankel, New York: There are two things I would like to speak of. One is the attempt that we have made to ascertain the standards among Visiting Nurses' Associations in maternity work. We have tabulated the reports and records of some 48,000 cases and have endeavored to set up a standard. We found that there was quite a variation in the reports of nursing associations both as to the number of visits paid and the length of service given. This data was published in a paper read in San Francisco, entitled "Standards in Visiting Nurse Work." We received reports from twelve of the largest organizations engaged in this work as well as from individuals and we feel that the report is very complete.

We are considering the publication of a pamphlet, entitled:—"Mother, Baby and Midwife"—the pamphlet that has been commented upon and criticized. I think you have misunderstood the attitude that we have taken. We do not recommend the midwife. We have from time to time sent out publications recommending a doctor or a nurse, but we have never recommended the midwife. We must however, use the means at our disposal. Water does not rise any higher than its source. Dr. Goler has been very successful in Rochester. He has succeeded in getting rid of the midwife and if you can get along without her, well and good. The reports sent to us by nurses in small communities lead us to believe that at present you cannot abolish the midwife in those communities. At the present time I do not feel that we are justified in carrying out a campaign to absolutely exclude the midwife. I think it must be done slowly and gradually and in time the visiting nurses and physicians will be substituted.

Dr. L. V. Waldron, Yonkers, N. Y.: I want to say something about the question of the nurse. We in Yonkers are up against the proposition of trained nurses costing \$30.00 a week for obstetrical cases. Now a number of people in moderate circumstances cannot stand \$30.00 a week; there is not enough left for the doctor either, and the result is that the people have to submit to

* Dr. Frankel wrote February 18, 1916, that the pamphlet had been withdrawn, "temporarily, at least, from publication."

the use of practical nurses, and practical nurses are a bane to us doctors, because we don't know what is going to happen after we have left. I have tried to train the mother to watch her practical nurse. I have insisted upon the pads being baked and the mother seeing that the practical nurse does not lay the pad down on the bed and then use it. I tell her that if the nurse does this, it cannot be used. She must use one that has just been taken out of the package that has been baked. In this way I put the mother on her guard to watch the practical nurse. She realizes that her life is at stake on account of the action of the nurse. If she finds that the nurse is doing this continually, she won't want that practical nurse next time. This is along the same line as the mother learning about the midwife. If she realizes what is wrong and is taught what is wrong, she will look out for it.

Dr. Lida Stewart Cogill, Philadelphia: I would like to speak from the point of view of the woman physician. It seems to me from the discussions there has been a tendency to place the practice of obstetrics upon a very low plane. I agree with Mrs. Putnam that we must have and hold high standards for this work. We women physicians are taught, and still continue to consider obstetrics the most important branch of medicine. We feel that the practice of obstetrics ranks with major surgery and put forth every effort to maintain this standing. I was very sorry at the meeting of yesterday to note the trend, in regard to mid-wifery, of advising such restriction of mid-wives and close supervision of their work that it would encourage a more intelligent class of women to take up the work and even suggesting that probably the trained nurse might take up midwifery. May that never happen! If the mid-wife, as they tell us, is a necessary evil then let us restrict them as much as possible but in the meantime encourage the more intelligent class, if they are interested in this line of work, to take the regular medical course and practice obstetrics in the proper scientific manner.

You may be interested in hearing of the pre-natal work we are doing. We have established pre-natal clinics in the two maternity hospitals of Philadelphia with which I am connected. In the Woman's Hospital Maternity Department we hold two obstetrical clinics daily and once a week a talk to expectant mothers is given upon hygiene, diet, proper clothing and exercise, care of self and baby, etc. We advise patients to register early in their pregnancy so that we may have them under close observation, having them report every two weeks or oftener if necessary. Upon registration a careful history is taken, physical examination and pelvic measurements made, record of blood pressure kept and urinalysis made every two weeks. In fact every effort is made to keep the patient in good physical condition at the same time instructing her how to live properly. At the West Philadelphia Hospital for Women we carry out the same plan of pre-natal work. After confinement they are again referred to the obstetrical clinic for the following six weeks. If after that time they need further attention the patients are referred to the gynecological clinic.

In conclusion I would add that the only solution of the mid-wife problem to my mind is a continued educational campaign among the ignorant classes teaching them the importance of having an obstetrician during confinement and encouraging them to enter a maternity hospital when possible..

The Chairman: We are glad to have that testimony. In discussing the question of obstetrics we like to remember that the Woman's Medical College of Philadelphia—with which Dr. Cogill is connected—has been a leader in the teaching of obstetrics for many years and that the high standards established by Dr. Anna E. Broomall when the department of obstetrics was organized have been maintained ever since.

Mrs. Putnam: There is one thing about which I feel that the laity, would like us to make some statement. The lay journals are very full of the question of twilight sleep; many lay folk advocate it, and think that because the doctors do not advocate it, that the doctors are benighted heathen. Now it seems to me that some moderately authoritative statement issued by this body on the subject of twilight sleep might possibly do a little good in suppressing some of the mis-information about it which is being circulated very extensively.

The Chairman: I am not going to talk about the value of twilight sleep—I am going to call upon some of these obstetricians to do that, but as a student of the obstetrical situation in our country, I feel that whatever the merits of twilight sleep as a therapeutic measure may be, we do owe to it a little debt of gratitude in view of the fact that it has made a great many people, professional and lay, sit up and think about the question of better obstetrics, and consider that possibly the treatment which women receive and the alleviation of their pain, may be subjects for great improvement in the future. I would like to hear from Dr. Huntington or Dr. Emmons on this subject. I know that in Baltimore the question is still being most carefully studied. It has been felt by Dr. Williams and others that no pronounced statement could be made about it until a sufficient series of cases had been studied to enable the investigators to gauge its merits and its value, and that study has not yet been completed.

Dr. Huntington: I am not prepared to speak on that subject. I really do not think that at a conference such as this any definite statement could be made in that regard. I think that it is perfectly fair to say however that the majority of trained obstetricians in this country at the present time are not willing to endorse the method of twilight sleep, and they are certainly very strongly opposed to the popular propaganda that has been going on in the lay press. But I agree with Dr. Sherwood that, in spite of the falsity of this popular propaganda, it has done good in that it has opened the eyes of an enormous number of women to the fact that obstetrics is something which requires something more than the attendance of a chorewoman.

I hoped that somebody from Fall River would be here to speak about their pregnancy clinic. That clinic is working, taking patients that naturally would have the midwife. The opposition it is meeting with is very strong, and is entirely from the physicians; they are fighting it tooth and nail. I read a paper before the medical society in Fall River some time before this pregnancy clinic was started. One doctor, who I afterwards heard had a large obstetrical practice, said that his regular charge for an obstetrical case in Fall River was \$3.00 unless he had to stay in the house longer than three quarters of an hour, in which case he charged \$5.00, and sometimes, on a long case as much as \$8.00, and of course no visits were made after the third day. That is the way the bulk of the obstetrics is being carried on. The Fall River pregnancy clinic, is modelled on the same plan as the pregnancy clinics that are being run in Boston under the supervision of Dr. Emmons, and the same as the pregnancy clinic at the Boston Lying-In Hospital.

I want to say just a word about the conduct of the department of obstetrics in the Harvard Medical School. As early as the summer vacation between the second and third year, the students begin to go on duty at the Boston Lying-In Hospital for periods of two weeks. During that time they sleep either in the branch of the hospital situated in the tenement house district in the South End, or else in the hospital proper. They are not allowed to be off telephone call for more than one hour for meals or making visits. For the first three days the student is on duty he is not allowed to go out on a call except to assist another student who has had more experience. No student delivers a case until he has had instructions from a member of the department of obstetrics. The student after he has had three days of instruction in the proper conduct of labor by the assistant in the course, goes out on a case. He has been instructed by talks from the house officer (there is a conference every evening, when all the students have to report), he has been instructed in exactly what he must do; he knows his limitations; he knows that his mark depends absolutely on whether he follows out the instructions given him by the house officer, who has it in his power to give him a mark that will necessitate his taking over an entire year's work. The student goes out on the case and has to report back any abnormality whatever, and the house officer who goes out on that case is under the careful supervision of a member of the staff who meets the house officer in conference twice a week when every case is discussed. A student while on service in two weeks will usually deliver between twelve and sixteen cases.

The requirements in obstetrics in the Harvard Medical School at the present time are that the student shall have conducted, himself, six cases. As a matter of fact, the average at the present time is between 30 and 40 for each student in the Harvard Medical school, and many students deliver as many as 80 cases. The fourth year in obstetrics, is without any question, the most popular elective course in the Harvard Medical school; three-fourths of the men elect the course. They have a period of two weeks again on service, and during that time one week is spent in attendance at the pregnancy clinic, besides their

two weeks of service, and besides their attendance at the pregnancy clinic, when they are not actually engaged in the conduct of a case of labor, they are supposed to be present at the ward visits of the visiting physician in the morning and see the conduct of abnormal cases and the progress of those cases. There is a conference every single afternoon for three weeks, and during the fourth week, six exercises in operative obstetrics. Now that is simply to show that at the present time there is at least one medical school that is instructing the student not how to be an obstetrician, but to know his limitations in obstetrics. The reason why I say that is because the student that has been through as much training as that is impressed, first of all, with the fact that obstetrics is a great branch of medicine, that it cannot be taken up by a man who has simply had a medical course. Of the students who have elected that fourth year course, I do not believe that 2 per cent of them would think of practising obstetrics without a post graduate course. They look upon it as exactly the same thing as major surgery, and very few of the graduates of the Harvard Medical School will indulge in major surgery unless they have had a hospital training, and the same thing is beginning to be true at the present time of obstetrics.

The Chairman: I am sure that all who are here feel that facts have been brought out which should inspire us with hope. In the first place we have heard what Dr. Huntington has told us about the teaching of obstetrics in the Harvard Medical School. Another great advance is shown in the wonderful new hospital in Pittsburgh. Still another in the extension of the work in obstetrics at the Yale Medical School along the lines described by Dr. Huntington in regard to Harvard, with a full time professor. The same is true of the work in San Francisco, at the University of California. One of the most encouraging things about the whole situation is the phenomenal growth of the prenatal work. Here we have the spread of information among lay men and lay women and the necessary demand for better obstetrics will follow that increased intelligence. There is another phase of the question that must be considered that is—has the State any responsibility? Is the community responsible in any degree for the care of the woman in confinement who has no resources and who cannot care for herself? This is a phase of the problem, which we have no right to evade.

ECONOMIC ASPECTS OF INFANT WELFARE

JOINT SESSION WITH PHILADELPHIA COUNTY MEDICAL SOCIETY

Wednesday, November 10, 1915, 8.15 p. m.

COMMITTEE

Chairman, MR. SHERMAN C. KINGSLEY, Chicago

MISS MINNIE H. AHRENS, Chicago

DR. HOWARD C. CARPENTER, Philadelphia

DR. C. E. FORD, Cleveland

DR. LEE K. FRANKEL, New York City

DR. LANGLEY PORTER, San Francisco

Wages and Employment as Factors in Infant Mortality

Maternity Insurance

**To What Extent May the Mother Substitute Proprietary Preparations
for the Advice of a Physician?**

ECONOMIC ASPECTS OF INFANT MORTALITY

SHERMAN C. KINGSLEY, Chicago

The infant welfare movement boldly undertook the task of lowering the baby death rate. It was not deterred by a world wide, persistent, age long, high rate of infant mortality or by assumptions that natural selection or decrees of Providence necessarily ordained a heavy toll of baby lives. The movement tackled the problem exactly as it found it. Indeed it went straight to the most difficult part of the task and took up the fight in places where babies die in largest numbers, where bewilderment and ignorance, sickness, poverty and delinquency are found in their fullest significance; where bad housing and congestion and the "essential unrighteousness of the twenty-five foot lot" accomplish their fullest measure of damage to children, especially to the babies.

Social workers are, in certain quarters, looked upon as apostles of discontent, promoters of unrest and agitators for higher wages and a too ideal social order. But this movement, like the tuberculosis crusade and many other ameliorative enterprises of a kindred nature, has proceeded on the assumption that individuals must in the long run be largely responsible for their own welfare and destiny and that in any effort at human conservation the first step should be to make each one, in the fullest measure possible, aware of his own responsibilities and possibilities. To this end the workers in this movement, after the manner of the wise men of old, have sought out the mother and the child and have endeavored to take to them the gifts which communities more and more know are worth bestowing—homely everyday wisdom, facts about feeding, rest, drinks of fresh water, cleanliness and general wholesome care—gifts which through friendliness and sympathetic encouragement these people have been able to receive and apply. Indeed the work has been undertaken after a manner and method which from still another element in the community has brought allegations that these workers are mainly palliating a bad situation and trying to make it possible for people to get

on with less than a living wage and under conditions which are intolerable.

Nevertheless, the workers in this crusade have concerned themselves first with things that can be remedied or bettered by those immediately concerned. Its babies mainly live in the one, two, three or four room tenement homes. A big majority of them are ushered into the world by the midwife. The "little mother" sister is the only nurse or mother's helper. The baby's mother, in addition to caring for him and the rest of the family as well, "sews pants" or does other things to augment the family income. Any one who follows these nurses on their rounds gets a fine example of resourcefulness and versatility. They must know how to make a lying-in hospital out of a disorderly, ill-odored tenement room, how to keep milk cool without ice, be able to make a satisfactory bath tub out of the receptacle which already with agility serves as dish and bread pan, know how to improvise a cradle from a drygoods box, to make an ice chest from a tin pail, yesterday's newspaper and saw dust, and how safely to modify milk in a tomato can and to sterilize the catsup bottle.

This part of the work is comparatively easy. It is a more serious task however to adjust the congested tenement home so as to give the mother who has borne and is nursing a child an opportunity for rest, quiet, and calm nerves, for that attitude of mind and condition of body which are advised by those who understand the toxins of worry, anger and fatigue. It is more difficult to overcome the nerve racking propinquities of the three room tenement home.

The results of this movement—improved household adjustments, better relation of individuals to their own circumstances, better care for babies, a marked reduction in infant mortality in families reached by these societies—constitute one of the most brilliant achievements in the social service field. It may be said of these workers—they have done what they could. Their efforts thus far bring the movement up to another phase.

The subject, Economic Aspects of Infant Mortality, seems to assume that the baby costs something. How much does he cost? How much should he cost: The first item is the cost of birth. Let us discuss briefly some of the expenses incident to bringing a baby into the world. Inquiries among the families known to infant welfare workers and visiting nurses in the city of Chicago give some of the

usual expenses in this line about as follows, it being understood that considerably more than half of this group of mothers are attended by midwives:

Average pay of midwife.....	\$ 5.00 to \$15.00
When a doctor is called, average fee, about.....	10.00 to 25.00
Cost of layette.....	6.00 to 10.00
Cost of cleaning or other service by neighbor or helper.....	8.00 to 10.00

The mother usually keeps about her work up to the time of confinement. The average period in bed after confinement is two to eight days. Then after the baby is born, he is of course of some necessary expense.

The Juvenile Court, of Chicago, has made a careful study of budgets in families dealt with in its Funds to Parents Department and has estimated that the presence of a new baby in the home adds something like this:

Extra milk and food per month for the mother, or for the child if artificially fed	\$4.22
Clothing for the baby, a month.....	1.00
Care of health.....	.75
Average expense per month.....	<hr/> \$5.97

Of course, this assumes that all goes well with the mother and the baby.

If these figures are anywhere near correct it means a minimum of something like \$100.00 to \$125.00 for the first year of the baby's life. If the baby dies, of course there is the expense of the funeral, and as a rule it costs more to bury a baby than to get him born. The immediate expense of coffins and hearses is greater than that of cradles and go-carts. Our workers say that it costs from one and a half to four times as much to get a baby buried as to get him born. Of course it is understood that in many cases lying-in hospitals, visiting nurse and other organizations perform obstetrical service gratuitously for many families. These figures give a close approximate to the minimum expense of the first year's care.

The maximum expense for babies under other circumstances is perhaps not known, but where there is an abundance of means expense items like the following have been given to us:

Fees for confinement cases are not unusual from.....	\$500.00 to \$1,000.00
Where the mother goes to the hospital, the total expense of hospital and medical service is often around.....	150.00 to 750.00
For wardrobe, a wide variation in price.....	
Nursing service, often day and night, two to four weeks \$30.00 to \$60.00 a week.....	50.00 to 240.00
Other expenses incident to giving pleasant surroundings and care to mother—wide range.....	
A baby nurse for year, \$8.00 to \$25.00 per week.	

These incomplete items would make total from \$700 to \$1,990.

Somewhere between these figures and those above is a sum of money that is necessary and proper for the care of a future citizen during the first year of his life.

The minimum figures indicate some of the more important items of initial and necessary expense. They do not take at all into account any suggestion of the standards of the space needed to give babies and mothers room. Baby deaths from smothering or kindred consequences of congestion are practically eliminated where housing accommodations are adequate, and where the mother has assistance. There is probably no way of knowing how much the mental and physical strain of over-crowding militates against the health of mothers in crowded homes or of estimating the economic cost of physical breakdown.

So much for this phase of the problem. In discussing the economic and social conditions in infant mortality, Dr. George Newman in his book on *Infant Mortality** says: "It is a well known fact that communities in which there is a large measure of poverty have a higher mortality from all causes at all ages than communities better circumstanced. This of course is not due only to poverty *per se*, but to all that poverty involves—heredity, upbringing, education, food, housing, overcrowding," etc. In this chapter on Influences of Domestic and Social conditions, Dr. Newman speaks of the different rates of mortality, both on account of the general population and that among infants in different communities, and in different parts of the same communities. He states that: "Differences between these infant mortalities represent not a difference in occupation only, but in domestic conditions and in social life. Occupation, no doubt, is indirectly concerned, as was pointed out by the Sanitary Commission of the Metropolis (London) in 1843, a return of which shows that the proportion of

* *Infant Mortality*, G. Newman, Chap. 7, p. 177.

deaths of infants to children born was 1 in 10 in the professional and well-to-do classes, 1 in 6 in the families of tradesmen, and 1 in 4 among the working classes."

There is a discussion on the question of wages and occupations in relation to infant mortality in the report of the Registrar General of England and Wales for 1911, pages 73-93. Tables are given which show a wide variation of infant mortality in different occupations. They are lowest in the professional group and highest in that of unskilled laborers. In the group comprising the upper and middle classes, including all the professions and such occupations as commercial and railway clerks and insurance agents, the infant mortality rate for 1911 was 76 per 1,000 births. In class 2, intermediate between the middle and working classes, the rate was 106; in class 3, comprising occupations where the majority of the men were skilled workmen, 112; in class 4, comprising occupations which include a considerable proportion of both skilled and unskilled workmen, 121; in class 5, unskilled workmen, 152; in class 6, textile workers, 148; in class 7, miners, 160; class 8, agricultural laborers, 96.9. In particular occupations the rates range from 27 among artists, 39 among medical practitioners to 167 among general laborers, the largest single group being that of costers, hawkers, etc., where it was 196.

One interesting phase of this report is that the mortality of miners' infants is "proportionately high in view of the fairly high wages earned while the mortality of infants of agricultural workers where wages are notoriously low, is considerably below that of other classes of manual workers. In this latter group the mortality is low from respiratory diseases and measles and lowest of all the group from diarrhoea and enteritis."

In the reports of the medical health officer of Birmingham, England, from 1909 to 1913 are various tables showing infant mortality in relation to wages of fathers. This information is compiled from data gathered in special investigations made of infant mortality in St. George's and St. Stephen's wards. These tables show a very much higher infant death rate in families where the father is out of work or earning less than one pound a week than where the father earns one pound or over. Even where the baby is breast-fed this is not in itself sufficient to counteract the adverse influence exerted by extreme poverty.

Tables are also given showing the health and weight of survivors in relation to wages of fathers with the advantage to the children whose fathers earn the higher wages. In Dr. Newman's Infant Mortality cited above are tables showing the death rate among babies according to the number of rooms occupied by the family. One of the tables relates to the Metropolitan Borough of Finsbury, 1905. The table is on the subject of Infant Mortality Rates from all and certain causes in Houses or Tenements of Several Sizes.

Size of Tenement	Census Popula- tion 1901	Number of births	All Causes	
			Infant Deaths	Infant Mortality per 1,000 Births
One-room tenement	14,516	532	117	219
Two-room tenement	31,482	1,216	192	157
Three-room tenement	21,280	468	66	141
Four-room tenement and up- wards of four rooms.....	33,185	464	46	99

These figures show a much higher fatality among infants from all causes living in one room homes in Finsbury in 1905 than in infants in two, three or four room homes.

Dr. Arthur Newsholme discusses this phase of the problem in the supplement of the 43rd Annual Report of the Local Government Board. This contains a third report on Infant Mortality and concerns the problem as it relates to Lancashire. All of these authorities counsel against drawing conclusions too hastily on any given phase of the subject and call attention to the complexities of the problem due to the inter-relation of all kinds of factors in the problem. In this report Dr. Newsholme says, it should be understood that he was discussing a particular locality. "It would seem that the average housing conditions do not throw much light on factors leading to excessive mortality. Collateral evidence makes it clear that this excessive mortality is most intimately related to details of domestic sanitation," and he states further that "it is clear that the largest infant mortality occurs in the oldest houses in the central parts of towns." He says further: "The minimum standard of housing should be enforced for every house. In the absence of such enforced minimum, it is open to belief

that the habits of tenants would greatly improve if they lived under conditions which did not constantly discourage efforts at improvement." Dr. Newsholme says that "domestic and municipal uncleanness act and re-act upon each other."

In the Quarterly number of the American Statistical Association, June, 1914, Dr. Louis I. Dublin has a valuable and interesting study on Infant Mortality in Fall River, Massachusetts. The paper discusses a number of phases of this subject. The following table is from Dr. Dublin's monograph:

NUMBER OF BIRTHS, CORRECTED NUMBER OF BIRTHS, NUMBER OF DEATHS, AND DEATH RATE BY OCCUPATION OF MOTHER

Occupation of mother	No. of Births	Corrected No. of Births	Number of Deaths	Rate per 1,000 Births
All occupations.....	802	746	151	202.4
Housekeepers	601	567	91	160.5
Gainfully employed	175	168	51	303.6
Unknown	26	11	9	.....

"There can be no question," Dr. Dublin says, "that the infants whose mothers were gainfully employed showed a much higher death rate than those whose mothers were engaged in housework only. Further examination discloses that those gainfully employed were almost entirely mill workers. It has therefore seemed unnecessary to bring into relief the small number of working mothers engaged outside of the mills. It has been impossible to determine from the schedules, with any degree of accuracy, how long before childbirth the employed mothers quit work, or soon after childbirth the work was resumed. We have therefore disregarded these important considerations in our table, illuminating though their analysis would have been."

On the question of the father's wages, Dr. Dublin says: "We are here concerned with the father, not so much as a factor in the inheritance of the child, as in his character of a provider who determines the economic conditions of the household. That these conditions play a part in mortality, both during infancy and later, has generally been agreed. The highest death rates are found in the wards of cities where poverty is most common; the converse also holds good. These findings have recently received striking confirmation in the Children's

Bureau study of Johnstown. The literature, and especially the German, is replete with trustworthy references to the strong positive correlation between low family income and high infant mortality. For it is the factor of income which determines the number of rooms occupied, their location in the city, the amount and character of the food, the need for supplementary work by the mother outside the home and other considerations which bear directly upon infant mortality.

"Unfortunately the data at our disposal did not lend themselves to an investigation of the mortality by amount of father's earnings, since a large proportion of the schedules did not give the wages of the father. It was possible, nevertheless, to get a measure of this item indirectly by analyzing the occupations of fathers. A multitude of occupations were, to be sure, represented, but, the largest number of fathers were engaged in textile work. There were, for example, 169 mill operatives, 79 weavers, and 29 doffers and spinners. In all, there were 360 men employed in the mills. It was thought safe to combine these into one group for the purpose of our analysis. We did not include mill overseers, mill clerks, drivers of mill teams, etc. In other words, our group was made fairly homogeneous in its inclusion of inside mill operatives.

"As opposed to them, 400 other fathers, engaged in a number of varied occupations, were brought together. They included a few professional men, clerks, carpenters, etc. This latter group is obviously heterogeneous, including the lowest paid as well as the best paid men in the community. Although the difficulties involved in drawing conclusions from such a contrast are obvious, the method will serve its purpose if it does no more than to indicate the singular condition prevailing among textile workers with reference to the mortality of their infants.

NUMBER OF BIRTHS, CORRECTED NUMBER OF BIRTHS, NUMBER OF DEATHS, AND
DEATH RATE BY OCCUPATION OF FATHER

Occupation of father	No. of Births	Corrected No. of Births	Number of Deaths	Rate per 1,000 Births
All occupations.....	802	746	151	202.4
Textile occupations	360	342	69	201.8
Other occupations	400	379	70	184.7
Unknown	42	25	12	.....

"The findings of other observers are again confirmed. There is a difference of 17 deaths per 1,000 in favor of the infants of non-textile workers."

It is fortunate for the cause of infant welfare, and indeed for the welfare of our country that the National Children's Bureau is studying this problem. The reports of its investigations in Montclair, N. J. and Johnstown, Pa. are interesting examples of studies that are going on in other places. The data already obtained on the economic aspects of this subject are extremely interesting and valuable. The other studies which will shortly be added will give a body of information that should be of nation-wide value.

In the study on Montclair, N. J., * is a table that shows that in that city the infant mortality rate was approximately two and one-half times as large in families where the income was less than \$12.00 a week as among families where the income was \$23.00 a week or more; that the mother's occupation bears a very close relation to the welfare of the baby. If the mother's employment during pregnancy involves the strain of long hours and hard work, the result is that she is less fit to bear the child or care for it after its birth. Her employment outside the home after the birth of the child means that the baby during her absence must depend for its care upon a relative, neighbor, or paid attendant; it means also the cessation of breast feeding.

In the similar study in Johnstown, Pa., ** is this statement concerning earnings of fathers: "A grouping of babies according to the income of the father shows the greatest incidence of infant deaths where wages are lowest, and the smallest incidence where they are highest, indicating clearly the relation between low wages and ill health and infant deaths. For all live babies born in wedlock the infant mortality rate is 130.7. It rises to 255.7 when the father earns less than \$521. a year or less than \$10. a week, and falls to 84 when he earns \$1,200. or more or if his earnings are 'ample.'"

In the publications just referred to, the writers caution against too hasty drawing of conclusions and also call attention to the fact that these reports deal with small communities and a comparatively small number of babies. However, as has been seen, the findings are in striking conformity with those cited from the English and German studies.

* Infant Mortality Series No. 4, Bureau Publication No. 11, p. 19.

** Infant Mortality Series No. 3, Bureau Publication No. 9, p. 45.

We stated in the beginning that the workers in this crusade have undertaken first to reach and influence individuals, to enable and encourage them to make that measure of improvement in habits and practices of care which is possible for the individual in spite of circumstances. The results, as was said before, have been striking and brilliant. However, the situation as indicated in the studies mentioned shows that we are now face to face with phases of the problem in which the community acting as a whole must concern itself.

In the chapter already cited in Dr. Newman's book on Infant Mortality, is this statement: "It is, I think, impossible for a man living in the center of the city (referring to London) and employed as a laborer at the standard rate of wages to keep a wife and family of three without being in poverty, this, notwithstanding the fact that he does not spend anything on drink or tobacco or in traveling to and fro to his work. His one chance for getting enough for house rent, clothing and fuel, lies in the family earnings being increased by his wife's earnings or by the earnings of a child or by taking in lodgers. The necessity therefore exists among this large class for the wife to leave her young children to go to work and for the children being put to work at the earliest opportunity." This observation fairly states the situation. It concerns a branch of employment which is essential to social well-being under the present industrial organization in a great city. According to Dr. Newman this class of employment does not pay sufficient wages to enable those engaged in it to rear even a moderate size family in health and efficiency. This should be the test. If workers are to be supplied to the world they must come through people raised in families.

Any line of industry or employment that is necessary for the well-being of a community should pay its workers a wage that will enable them to live and reproduce. No line of employment, because it does not sufficiently compensate its own people, should be allowed to become chronically parasitic and to draw its workers from the ranks of those necessarily reared on the wages of other industries, nor should its inadequate pay be subsidized by relief from public and private charity.

The infant welfare crusade has, as we have said, first of all endeavored to help individuals and families to better their own condition and to meet the fifty per cent or more of responsibility which per-

haps must always remain with them. The infant welfare worker has met the obstacle of congestion, insanitary tenements, over-crowding, smoke and dirt, under-nourishment and low wages. In spite of all these handicaps, a marked reduction of infant deaths has been accomplished and it is firmly believed that there is a corresponding increase of vigor among the babies it has served. This work has come perhaps the nearest to a maximum use of opportunities for improvement of any line of social service. The work so far has brought the movement to the broader economic aspects—to measures and conditions over which the individual cannot exercise control—a more equitable distribution of the fruits of industry, a living wage, housing, food supply and other measures of a kindred nature. These are community problems. They represent the fifty per cent of responsibility which rests with society, the regulations which the people, acting in their social capacity, must exercise for the well-being of society.

Surgeon General Gorgas tells us that a measure which has had a leading part in solving health questions in the Canal Zone and in making the building of the Panama Canal possible was a raise in wages to a point where the workers could themselves be the chief factors on questions of housing, cleanliness, clothing and food. It is the belief of many people that similar measures would help to solve similar problems in the tenement regions in "the city wilderness" as well as in the jungle of the tropics. The infant welfare crusade has taken life saving advice to the mother and her baby—the community must find some way of giving a living wage to the father.

MATERNITY INSURANCE

LEE K. FRANKEL, Ph. D., New York

Sixth Vice-president, Metropolitan Life Insurance Company

INTRODUCTORY

The growing interest in adequate and scientific care of women during pregnancy and maternity is manifested by the request of the American Association for Study and Prevention of Infant Mortality to have a paper on this subject included on its program. In view of the comparatively little information obtainable regarding the interesting subject of maternity insurance in literature published in the United States, it has been deemed advisable to prepare a paper viewing the subject from various angles, and to attempt to record the historical sequence and development of maternity insurance as a basis for any action that may be deemed desirable in the United States.

Practically all the literature that is at present available is from foreign sources, owing to the fact that, aside from Australia, maternity insurance, along either private or semipublic lines, has developed only in continental Europe and particularly in Germany.

The subject is of particular interest to the people of the United States because of the social insurance legislation in England, under which maternity benefits are a part of the national health insurance scheme. As yet there are not sufficient data available to indicate the results of this experiment.

The subject of maternity insurance will be presented in this paper under the following headings:

1. History of motherhood protection through voluntary philanthropic agencies and through maternity insurance.
2. Legislation affecting motherhood.
3. Philosophy of maternity insurance.
4. Present methods of protecting motherhood, particularly along the lines of social insurance in European countries.

5. Cost of maternity insurance.

6. Developments in the protection of mothers in the United States, and possibility of organizing a scheme of social insurance under which cash benefits and medical attendance will be given to women during the period of maternity.

HISTORY

Organized effort for the protection of motherhood is not a thing of the immediate past. Because of the need existing among the dependent classes and the desire on the part of the more prosperous in the community to give provision to dependent women at the time of maternity, agencies for this purpose developed in the Middle Ages. As early as the Thirteenth Century there is a record of free hospital aid being given to poor women in confinement at Pfullendorff, Germany. Among the many activities of the societies for the relief of the poor existing in the Roman Ghetto in the Thirteenth Century, the care of lying-in women was included. In 1339 the hospital at Nürnberg admitted maternity cases free and also provided for home care. In order to make the latter work effective a public midwife was employed by the city. These measures were taken in order to reduce the custom of begging on church steps by pregnant women. Nevertheless, patronesses of the charities gave badges to poor women permitting them to beg at church doors during pregnancy. In 1428 Frankfurt a. M. began to give home aid to mothers through the appointment of public midwives. This example was followed in other parts of Germany during the Fifteenth Century.

The movement to give maternity care to lying-in women extended to other parts of Europe. In France there is a record of the founding of the Society for the Aid of Nursing Mothers in 1714. Thirty-eight years later the *Compagnia delle puerpere* came into being at Turin, Italy, for the benefit of pregnant women. In 1784 the *Société de charité maternelle* was founded at Paris. Like its predecessor, it had the purpose of providing for nursing mothers, and was destined to have a long period of usefulness. Between 1788 and 1904 it aided 116,034 mothers, turning over to them 9,915,812 francs in benefits.

In 1796 the French convention decreed that all mothers were

entitled to public hospital care. In the following year a lying-in hospital, the Maternité, was founded in Paris. Since that time numerous lying-in hospitals, day nurseries, and similar institutions have sprung up all over France. Among these may be mentioned the Secours d'allaitement, established by the city of Paris, which furnishes a nursing benefit of thirty francs to indigent women at the time of maternity.

An attempt to introduce an insurance, or, rather, a mutual aid feature was made in Paris, in 1891, by the founding of the Mutualité maternelle. This society, in return for an annual contribution of three francs by the insured, furnishes a confinement benefit of forty-eight francs, and a nursing benefit of ten francs. At the end of 1908 it had a membership of 26,088. In that year its total expenditures amounted to 100,615 francs, of which 98,752 francs, or 39.67 francs for each case, were given as maternity benefits. The precedent established at the capital has been followed extensively in other municipalities of the French provinces. It should be noted here, however, that the organizations, while apparently mutual, are in reality largely philanthropic. Only a small portion of the income is received from the dues of members. To a large extent the income is made up of State and municipal subsidies, and donations and bequests from philanthropic persons.

Another characteristic of French development has been the so-called Gouttes de lait, corresponding to the infant welfare stations in the United States. These are not only found in France, but have been transplanted to the French sections of Canada, and are quite common in Montreal and Quebec. The primary purpose of these societies seems to be to supply infants with sterilized milk.

Provisions for maternity care along philanthropic lines, similar to those indicated above, have been instituted in practically all civilized countries. In Germany a society known as the Hauspflege-Verein has attempted the organization of a corps of trained women to be sent into homes during the confinement period. These women carry on the ordinary duties of the household, during the incapacity of the mother. The lying-in hospital has become an accepted fact, particularly in the large cities. Many of these institutions not only give indoor service, but have arranged to care for the patient in her own home. Lying-in relief societies, which give cash and material benefit, as well as medical care, to indigent women during the lying-in period, are quite common.

LEGISLATION AFFECTING MOTHERHOOD

Legislation directed toward the protection of motherhood is a result of the industrial revolution. Before the introduction of machinery, the management of the home as well as the manufacture of many articles now made in factories was the work of women. Spinning and weaving were home occupations. Home industries are still quite common in Germany and other European countries; in fact, the number of such independent workers is still so large that special consideration has had to be given to this group in the sickness insurance legislation.

The development of the machine, however, meant the transfer, from the home to the factory, of many industries in which women had been employed. Economic pressure, the inability of the chief male wage earner to support the family under existing industrial conditions, the ability of the employer to obtain female labor at a lower rate of wages than male labor, and the lack of sufficient employment in the home to keep all of its female members occupied, eventually brought women into the factory and mill. So long as this new factor was limited to unmarried women, no particular principle was involved other than the regulation of the hours and conditions under which they might work. The introduction of the married woman and the prospective mother into industry, outside of the home, in which she naturally belonged, precipitated problems of legislation necessary to protect both the working mother and her child. The detailed philosophy of the legislation will be considered later.

In Europe laws forbidding employers to allow women to work for a definite period prior or subsequent to maternity are general. The industrial code of Germany forbids women's work during four weeks after confinement, and permits it during the next two weeks only on the certificate of a physician. In Austria the law requires a rest period of four weeks after childbirth, and in Switzerland there is a rest period of two weeks before and six weeks after childbirth. France has also enacted a compulsory rest period of eight weeks, which are to be equally distributed before and after childbirth. Seven weeks of rest are required in Italy. A rest of four weeks after childbirth is demanded by the Belgian and Portuguese laws, and the same period, which may be extended by one or two weeks through a medical certifi-

cate, is required under the law of Spain. Holland and Norway have both instituted a compulsory rest period of four weeks, and Sweden has a six weeks rest period law. Great Britain prohibits the employment of women within four weeks after childbirth. It is of interest to note that in the maternity insurance legislation which has resulted from these attempts to protect motherhood, the unmarried mother, as a rule, is given the same consideration as her married sister.

In the United States legislation directly affecting motherhood is much less common than in Europe, owing in all probability to the more recent entrance of married women into factory life. Laws regulating rest periods before and after confinement have been enacted in Connecticut, Massachusetts, New York, and Vermont. In Connecticut a compulsory rest period of four weeks before and four weeks after childbirth is provided. In Massachusetts there is a compulsory rest period of six weeks, two weeks of which are before childbirth. New York does not provide for a rest period before childbirth, but the employment of women is forbidden for four weeks after this time. The requirements of the Vermont statute are the same as those of Massachusetts.

Indirect provision for the protection of motherhood is found in the statutes of various States. Conditions of labor of women are carefully regulated in a great many. Women are forbidden to engage in certain occupations. For example, in Alabama mine work is not allowed; in Arizona women are not allowed to work in saloons. Colorado, Illinois, and Indiana have a provision similar to that of Alabama. Iowa and Louisiana forbid work in saloons. These laws, as well as many others for the protection of the woman wage earner, while not primarily designed to protect working mothers, have, it is safe to say, the indirect effect of protecting the children of the next generation.

Another group of laws more general than these limiting occupation, but with probably the same indirect intent and effect, are those specifying the maximum working day. These laws are general in almost all States. California and Washington limit the working day to eight hours, while South Carolina has a maximum of twelve hours a day and sixty hours a week.

It is interesting to note in these various laws that the lowest number of hours and the most stringent regulations of the conditions

of work are found in the far West. Specific regulations forbidding work during and after pregnancy, however, appear in only a few of the most densely settled manufacturing States in the east.

Minimum wage legislation, although not specifically directed toward the protection of mothers, aims very definitely to provide women with a sufficient salary so that their health and morals may be preserved. It seems reasonable to suppose that one of the underlying purposes of this is to protect the future mothers. The following States have enacted such legislation: California, Colorado, Massachusetts, Minnesota, Nebraska, Oregon, Utah, Washington, and Wisconsin.

The newer development in child protection—mothers' pensions—cannot fairly be considered under the group of legislation affecting motherhood. The aim in this case is to provide a substitute for the wage earner, in order that children may have the home care of the mother. The fundamental purpose is to provide adequate protection for children rather than to protect women or women workers.

THE PHILOSOPHY OF MATERNITY INSURANCE

Fully to appreciate the need and the desirability of maternity insurance it is necessary to point out the fundamental principles upon which this plan of protection is based. This was most satisfactorily done by Professor Mayet, of Berlin, than whom no one has done more to develop maternity insurance. In a paper which he read before the International Congress on Social Insurance at Rome, in 1908, Mayet developed the following theses:

1. *The physiological needs of the mother and of the child are fundamental at the threshold of the infant's life.* If they are not observed, both mother and infant suffer; sickness and death are the punishments for neglect. He continues: "We need healthy mothers, healthy infants, if the members of the coming generation are to be equal even to the ordinary tasks of economic, civil, and national life as workmen, husbands, citizens, and soldiers, and as workingwomen, wives, and mothers; we need healthy mothers and healthy infants if the coming generation is to lead the human race farther along the road to perfection. It is the task of maternity insurance to assure the great working classes of the fulfilment of the physiological needs of the pregnant woman and the fetus, the mother and the infant."

2. *Industrial work, if protracted to the time of childbirth, is clearly injurious to the mother.* Mayet cites J. Pelc, in the Bohemian sanitary report for 1899-1901, according to whom the high rate of stillbirths in northern Bohemia is explained by the fact that women work up to the end of pregnancy, in order not to forfeit their membership in the societies; the results are manifested in premature births, faulty presentations of the fetus, and umbilical difficulties.

Bachimont found, in France, that the average duration of pregnancy was 269 days among women who observed a rest period before confinement, but only 247 days among those who did not; the duration was normal in the case of the former, but twenty-two days too short among those who worked up to the very time of childbirth.

It is well known that a large measure of the abdominal disease of women of the working classes is attributable to the fact that they are unable to obtain that rest after confinement which nature peremptorily demands. It is very difficult, however, to obtain any statistical basis for determining the extent of the injuries suffered.

3. *The vitality of the unborn child is impaired through continued industrial work by expectant mothers.* At the Tenth International Congress on Hygiene and Demography, in 1900, Professor Pinard announced the results of 4,500 observations, from which it appeared that the children of women who worked up to the time of confinement were either born too early, or had a lower weight than the children of women who had been enabled to rest before confinement. He came to the conclusion that the children of mothers who had stopped work two or three months before childbirth were, on the average, at least 300 grams heavier than infants born to mothers who had worked in a standing position up to the last moment.

At the Maternité and at the Clinique Baudelocque—two lying-in institutions occupied chiefly by working women—out of a total of 188,000 children born and weighed, more than 72,000 weighed less than 3,000 grams, and almost 30,000 prematurely born infants weighed less than 2,500 grams.

George Reid, medical officer of health for Staffordshire, has studied the correlation of abnormalities with factory work. In 1906, reporting in the *Lancet* on the experience of twenty-three years, he said that, in districts where more than twelve per cent of the married population are employed in factories, there are fifteen abnormalities

in 1,000 births; in districts, however, where less than six per cent of the female married population is so occupied, there are only six abnormalities per 1,000 births.

4. *Pregnancy, childbirth, confinement, and breast feeding have been intended by nature to form an undisturbed sequence.* Mayet points out the fallacy that artificial nourishment can ever be equal in value to the natural nourishment of the mother. This has been so amply demonstrated in the United States that further discussion here is unnecessary. European statistics that may be cited are those of Kriege and Seutemann, showing a mortality in Barmen of 6.8 per cent of breast fed infants among workers earning less than 1,500 marks, but of 11.1 per cent of bottle babies among workers earning more.

5. *Infant mortality is determined, not only by the factor of breast feeding, but also by the duration of the breast feeding.* Roesse, of Dresden, found that the extent of dental decay and rickets varied inversely with the duration of breast feeding. On the basis of statistics of military recruits it has been proved that the weight, and the chest and other measurements, of adults vary directly with the duration of the period during which, as infants, they were fed at the breast. The same relationship is evident between breast feeding and efficiency in school. These facts have been made clear by Friedjung, Groth, and Hahn.

6. *Breast feeding is decreasing both in duration and in frequency.* This is to be attributed, in large measure, to interference with nursing by the industrial activity of women. It may be noted that in the United States the number of married female wage earners increased from 511,740 to 773,363 between the years 1890 and 1900. The number of such workingwomen at the present time is probably over one million.

As a result of the foregoing facts Mayet infers the necessity for a scheme of maternity insurance which will give to the insured the following benefits and protection:

1. A rest period before childbirth, with full compensation for wages lost;
2. Aseptic conditions of birth, and obstetrical aid by a midwife and, if necessary, by a physician;
3. A rest period after childbirth, with full compensation for wages lost;

4. In case of necessity, maternity care, either at home or in an institution;

5. Extension of the period of breast feeding by means of nursing benefit, and, if necessary, a pecuniary aid toward the nourishment of the infant.

MATERNITY INSURANCE LEGISLATION

Attention has been directed toward legislation forbidding women to work for definite periods prior or subsequent to childbirth. The operation of these laws worked hardships in many cases. Frequently, when the mother was one of the principal breadwinners of the family, the latter was deprived of the main part of its income during her period of enforced rest. The law made no provision against such a contingency.

Attempts have been made to meet the situation through maternity insurance providing for the loss of wages, and for the payment of the financial costs of maternity. Schemes of this kind have been organized by private societies and insurance companies, but with no measure of success. For the sake of the record mention may be made here of two such attempts.

A birth insurance society was founded in Boston, in 1905. In exchange for dues of three dollars a month, and, in addition, one dollar a year, it undertook to pay \$200 on the birth of a living child after the first ten months of membership, \$300 after nineteen months of membership, \$400 after twenty-eight months of membership, and \$500 after thirty-seven months of membership. After a few months the organization died a natural death.

GERMANY

The Iduna, an insurance company of Halle, Germany, recently entered the field of maternity insurance. The company is prepared to make contracts with benefit societies and mutual organizations. Confinement benefit is given, after a waiting period of nine months; if the birth occurs within that period the premiums are returned. A special nursing benefit, supplementing the regular maternity benefits, may be given to a mother who has nursed her infant at least four weeks. The plan is too young to enable us to form any judgment on the basis of its experience.

The important, and, indeed, the main development of maternity insurance, however, has been, not along the line of a separate and distinct form of insurance, but as a phase of sickness insurance, the foundations for which were laid in Germany. National sickness insurance was made compulsory in that country by the act of June 15, 1883. Under this law the existing mutual sickness societies were continued and were permitted to give benefits in addition to those required under the law, which included childbirth benefit. In 1903 the duration of maternity benefits was increased from four weeks to six weeks.

The Imperial Insurance Code was passed on July 19, 1911; it embodied a compilation and unification of the existing statutes and decrees. Maternity benefits were standardized and their further development was provided for. Under the code, maternity insurance is compulsory for members of most of the commercial and industrial pursuits, as also for homeworkers, whose annual income does not exceed 2,500 marks. Insurance is voluntary for members of these occupations if they are exempt from compulsory insurance, as also for small entrepreneurs and their families. The insurance is administered by local, factory, building, guild, or miners' sick benefit societies. The local society is the official organization, and other societies are permitted to exist only if they do not endanger its vitality. A special form of the local society is the agricultural society, which provides principally for agricultural workers and domestic servants.

Under the German law there is a waiting period of ten months, after which confinement benefit, to the amount of the weekly sick benefit, is given for a period of eight weeks; at least six of these must be after confinement. In the agricultural funds, however, the duration of benefit may vary from four to eight weeks, according to the statutes of the society. With the consent of the mother, institutional care or home care may be given. In the former case, "house money" is given to the dependents of the insured to the amount of half the weekly benefit; in the latter case an amount may be deducted up to the same proportion. Statutes of societies may give medical and obstetrical services of midwives and physicians. They may also grant benefits to uninsured wives of insured persons. In the case of women who have been members for at least six months, physicians and midwives' services may be given for ailments of pregnancy. In case of disability from the same cause pregnancy benefit may be given, to the

amount of the confinement benefit, up to a total duration of six weeks; this period may be deducted from the prenatal period for which confinement benefit is given. The societies may furnish, to mothers insured six consecutive months before confinement, nursing benefit up to the amount of half the sick benefit and up to the duration of twelve weeks after confinement. Compulsory members pay two-thirds of the dues; one-third is borne by the employers. Voluntary members must bear the total burden of the dues themselves.

The war has brought into existence a number of legislative acts in Germany designed to cope with the resultant change in conditions. The act of August 4, 1914, concerning the Assurance of the Solvency of Sick Benefit Societies, limited considerably the welfare work on behalf of mothers. Only the regular benefit required by law could be furnished, unless the insurance authorities had been convinced that the solvency of the society would not be affected by the giving of greater benefits. Confinement, pregnancy, and nursing care of the wives of insured persons was abolished. It soon appeared that the sickness societies were less shattered by the war than had been expected, and it appeared practicable to impose upon them once more a part of those burdens of which they had been relieved. It was then found, however, that even the full scope of confinement benefit, as it had existed under the Code before the beginning of the war, was not sufficient to meet the new contingencies which had arisen. Maternity benefit, as stated above, was limited to mothers who were themselves subject to compulsory insurance. The Imperial Government came to the conclusion that the protection of uninsured wives of soldiers could not be dispensed with, but that this burden ought to be imposed, not upon the societies, but upon the Empire. Hence the Reichstag, in voting the second war credit on December 2, 1914, provided 200,000,000 marks for confinement benefit during the war, as well as for the aid of communities and communal unions in the field of war relief.

On the following day the Federal Council enacted a law extending materially, for the duration of the war, the scope of the maternity insurance. Under this law uninsured wives of insured participants in the war are entitled to a single payment of twenty-five marks toward the costs of confinement; confinement pay of one mark a day for a period of eight weeks, of which at least six must be after the actual

confinement; aid, up to the amount of ten marks, toward the costs of treatment for the ailments of pregnancy; and nursing pay, up to the conclusion of the twelfth week after confinement, to the amount of half a mark a day. As regards the monetary benefit in connection with the ailments of pregnancy, free treatment by midwives and physicians, as well as the necessary medicines, may be furnished instead. The maximum expenditure permissible in each case is 133 marks. All costs are borne by the Empire.

Under this act the insured wives of insured participants are entitled to the same benefits as have been enumerated above; however, they may receive larger confinement benefit, if this is provided for by the statutes of the society. In the case of women in this class the confinement pay is furnished by the society, while the remaining benefits are given by the Empire.

The insured wives of uninsured participants are entitled only to the benefits guaranteed by the statutes of the society, even if these are less than those provided for by the act. All costs in this case must be borne by the societies themselves.

This act was supplemented by others of January 28, 1915, and April 23, 1915, which clarified the interpretation of the earlier legislation. It was stated expressly that its provisions were to apply to the merchant marine, the agricultural industry, and domestic service, as well as to other occupations. Moreover, relief was extended to persons whose income did not exceed 2,500 marks a year before the beginning of the war, or whose income after the entry of the husband into service does not exceed 1,500 marks plus 250 marks for every child already born and not yet fifteen years of age. The expression "of small means" (*minderbemittelt*) was employed, instead of "needy" or "indigent" (*bedürftig*), in order that the aid might not bear the stamp of poor relief.

AUSTRIA

The action of Germany, in the enactment of the initial legislation of 1883, had a marked bearing upon the policy of other countries. In 1888 the situation of the sickness insurance societies led to a necessary revision of Austrian legislation on the subject. The resulting act included provisions for the compulsory maternity insurance of workers and administrative officials in trade and industry. The insurance was

made voluntary for agricultural workers, forestry workers, and home-workers. As in Germany, two-thirds of the dues are borne by the employees, and one-third by the entrepreneur. However, employers are not required to contribute in cases where the income of the insured is 2,400 marks per annum or more, or where the insurance is voluntary. The contribution of employees must not exceed two per cent of the basic wage; that of employers must not exceed one per cent. After a waiting period of six months, maternity benefit, to the amount of one and a half times the basic wage, is given for a period of four weeks. Medical and obstetrical aid, and medicines and therapeutic measures, are also furnished.

NORWAY

The first Norwegian commission to investigate the subject of sickness insurance came into being in 1885. After a long period of discussion, an act was passed in 1909, and was amended in 1911. The law includes maternity provisions. Insurance is compulsory for all workers and salaried employees. Here again, as in Germany and in Austria, and, indeed, in most other countries, societies—originally entirely voluntary in character—are utilized for the administration of compulsory insurance. There is a waiting period of ten months. Recognized societies must furnish sixty per cent of the basic wage for six weeks, as well as medical benefit, if this is necessary. Six-tenths of the dues are borne by the insured, one-tenth by the employer, two-tenths by the State, and one-tenth by the community. The limits of income are 1,400 Norwegian kroner a year for compulsory members and 1,000 for voluntary members, in the cities, and 1,200 kroner for compulsory members and 800 for voluntary members, in the country.

DENMARK

The Danish law was passed in 1892, and was amended in 1915. Insurance is voluntary. Societies granting home or hospital care, as well as medical and obstetrical service, receive, upon recognition, State subsidies of one-quarter of their expenditures. The minimum maternity pay is one Danish krone a day, and it is given after a waiting period of ten months.

BELGIUM

The Belgian law was passed in 1894. Here, as in the case of Denmark, subsidies are given to recognized mutual aid societies furnishing maternity benefit.

HUNGARY

The Hungarian act of 1907 is again modeled after German legislation. Maternity insurance, associated with sickness insurance, is compulsory for all workers in industry, trade, and commerce, except in so far as it is voluntary for agricultural workers, homeworkers, domestic servants, and persons exempt for special reasons. The limit of income is 2,350 Austro-Hungarian kronen. Half the contributions are borne by the insured, half by the entrepreneurs. Confinement benefit must be equal at least to sick benefit, although it may be increased by the statutes of the society. It is payable for six weeks; this period may be extended to eight weeks. Free medical and obstetrical aid is furnished, not only to the insured, but also to dependents of the insured, for a period of six to eight weeks.

LUXEMBURG

Maternity insurance has been known in the little state of Luxembourg since the passage of the act of 1908, based upon the bill of 1901. It is compulsory for workers in all occupations if they do not earn more than 2,400 German marks a year. There is a waiting period of six months. Maternity benefit, equal to the sick benefit, must be given for four weeks; this period may be extended by statute to six weeks. The scope of the benefit may also be widened to include the uninsured wives of members.

ITALY

In 1910 Italy passed a law which called into being a national maternity fund, devoted entirely to the compulsory maternity insurance of all female industrial workers of childbearing age. Insured persons and employers contribute in equal amounts. At ages fifteen

to twenty the worker and the employer each contribute one-half lira a year; at ages twenty-one to fifty each party contributes one lira a year. In addition there is a State subsidy of ten lire per confinement. The government also remits taxes and fees, and bears the expenses of administration. There is a confinement benefit of forty lire.

SERBIA

The Serbian act was passed in the same year. Sickness insurance, which is compulsory for commercial and industrial workers, includes maternity insurance for six weeks before and six weeks after confinement. Half the dues are borne by the insured person, and half by the employer; in addition there is a State subsidy.

SWITZERLAND

Switzerland fell into line in 1911. Swiss recognized societies receive a federal subsidy toward confinement benefit and nursing benefit. Membership is voluntary, but may be made compulsory in the individual cantons. The law requires that recognized societies pay a maternity benefit of at least three Swiss francs a day, for a period of at least six weeks, as well as an additional benefit of twenty francs for nursing during the four subsequent weeks. Medical aid and medicines may be furnished besides the maternity pay, or instead of it, according to the statutes of the society. There is a waiting period of nine months. The federal subsidy consists in a payment of twenty francs toward the confinement benefit and of the entire nursing benefit.

GREAT BRITAIN

The year 1911 also marked the passage of the British National Insurance Act, under which sickness insurance, including maternity insurance, is compulsory for commercial, clerical, and industrial workers; it is voluntary for workers who have been exempted for special reasons. The annual income of the insured must be less than £160 a year, except in the case of manual laborers. The minimum age of entrance is sixteen years; the maximum sixty-five. The insurance is administered by approved societies, although there is also a place for

private friendly societies. Those contributors who do not wish to join any society are placed under the supervision of insurance committees for the various districts. The dues are sixpence a week. If the income of the insured is one shilling and sixpence or less a day, fivepence are paid by the employer and one penny by the State; from that point up to and including two shillings of income a day, one penny is paid by the insured, fourpence by the employer, and one penny by the state; from this point on, threepence are paid by the insured and threepence by the employer, and there is no state subsidy. There is a maternity benefit of three pounds to insured mothers, and of half that sum to mothers who are not themselves insured, but who are the wives of insured persons. In case of institutional treatment, benefit is paid to the dependents of the mother. The physician or midwife is paid out of the benefit. There is a waiting period of twenty-six weeks for compulsory members and fifty-two weeks for voluntary members.

RUSSIA

The Russian Workmen's Insurance Act of 1912 provides for maternity benefit, varying in amount between half the wage and the full wage, for two weeks before and four weeks after childbirth. Under earlier legislation, the funds obtained from the accumulation of fines in industrial establishments are devoted partly to pregnancy benefit. Employers are required to furnish hospital or dispensary treatment, as also, in large establishments, the services of midwives. The new social insurance is administered by mutual aid societies and establishment funds.

SWEDEN

Under the Swedish act of the same year, maternity insurance is required of the voluntary societies if they are to obtain recognition. The minimum maternity benefit is ninety öre a day, payable for at least two weeks. However, hospital treatment may be furnished as an alternative for pecuniary benefit. The state subsidy consists of fifty-eight öre per day of benefit, for a maximum period of forty-two days and upon a maximum insured sum of four kronor a day.

AUSTRALIA

In Australia an entirely different philosophy underlies the maternity allowance provision, which also dates from 1912. In all other countries there are salary limits to the employment benefits; contributions are made by the workers, or by the employers and employees, and, in some cases, there are states subsidies. In Australia, however, a gift of five pounds is made by the Commonwealth to each mother upon the birth of a child. This covers all classes in the community, and cannot properly be classed as insurance.

RUMANIA

Under the legislation of 1912 and 1913 all Rumanian industrial workers are compulsorily insured, through the medium of the guilds and free societies. The contributions of the insured vary between five and sixty bani. After a waiting period of twenty-six weeks, confinement benefit is given for six weeks, with subsequent nursing benefit for the same period.

A number of points are clearly brought out by the brief summary of legislation that has been given above. Provision for maternity insurance is general in European countries. In almost all instances the contingency of childbirth is classed as sickness, and provision is made to give care and to provide a benefit to compensate for the wages lost. All members of a society, irrespective of age, sex, and conjugal condition, contribute to the insurance funds. These points must be carefully considered if foreign experience is to be of value in analysis and comparison.

COST OF MATERNITY INSURANCE

Professor Mayet has endeavored to determine what the cost of maternity insurance would be, upon the basis of giving certain pecuniary benefits to the insured, together with the necessary medical care and attention. He has outlined his scheme, not as a separate maternity insurance proposition, but as part of a general scheme of sickness insurance. The estimate which he gives is interesting, and is

submitted here, not as a statement of what might be possible in the United States, but simply as evidence of what was deemed necessary in Germany at the time Professor Mayet's thesis was prepared.

He assumes that the annual earnings of a female worker are about 580 marks, or about 11.20 marks a week. Compensation for a rest period of twelve weeks (including time before and after birth), will then be 134.40 marks.

The midwife's fee, on the basis of Saxony, he puts at ten marks.

He does not calculate a physician's fee for every birth, and consequently puts an average for all births at five marks.

Medicines and minor needs for asepsis will amount to five marks.

Nursing benefit is to be given, even if not in all cases. The first benefit, to the amount of twenty-five marks, will be given to mothers nursing their children for the thirteen weeks immediately after birth; the second benefit will be given, to the same amount, if nursing is continued during the next three months. Thus the total amount will be fifty marks.

Cost of home and institutional care, not necessary in all cases, will average fifteen marks.

Administrative expenses are estimated at one mark.

Adding up the various items, Mayet obtains an average total cost, for each maternity case, of 220.40 marks.

Mayet says that these requirements are practicable on condition that no distinction is made, in the payment of dues, between male and female and between married and unmarried members. Such a regulation would be just, since men and women are equally concerned in the child; even unmarried men may properly be called upon to bear their share, in expectation of the benefits which, as married men, they will later draw. Further, the principle of the uniform treatment of large groups is one which is already prevalent in German sickness insurance. He also says that the introduction of a fully developed maternity insurance will be easily practicable if it is to be extended only to female members. Taking into account, as a denominator, the membership of both sexes, there was one confinement among fifty-one members in Austria; one in 52.6 in Munich in 1906; and one in sixty in Leipsic, during a considerable period. On a basis of one birth to fifty members, and on an estimate of 220.40 marks a case, the average expense for each member would be only 4.41 marks a year or 8.5

pfennigs a week. The average weekly contribution of the members of local, factory, building, and guild sickness funds in Germany was fifty pfennigs in 1906, and an addition of 8.5 pfennigs would be thoroughly practicable: it would involve an increase of dues only from three per cent to 3.5 per cent of the wage.

The problem will be more difficult if maternity insurance is to be extended to the dependents of members. The insurance of dependents has hitherto been a voluntary addition on the part of the societies to the benefits required of them by law. Doubtless it has not yet been made compulsory because of the lack of confidence of the legislators in the ability of the smaller societies to bear the financial burdens involved. As the fusion of the 23,000 sickness societies into a limited number of large centralized societies is contemplated, however, this obstacle will be done away with.

Mayet points out the necessity of the protection of female dependents of members—the overwhelming majority of whom would be the wives of members—and next goes into the question of cost. Instead of the full compensation of 11.20 marks a week, however, only the standard local wage for unskilled female workers, which is estimated at six marks a week, is taken into consideration.

On this basis he calculates the expenses, under the head of maternity insurance, of a society of 100,000 members, as follows:

	Marks.
2,000 births among members at 134.40 marks compensation (12 times 11.20 marks)	268,800
5,200 births among dependents of members at 72 marks benefit (12 times 6 marks)	374,400
Midwives' fee for 7,200 births at 10 marks.....	72,000
Physician's fee at 5 marks.....	36,000
Medicine and minor remedies at 5 marks.....	36,000
Nursing benefit at 25 marks.....	180,000
Home treatment, welfare stations, maternity homes, etc., at 15 marks....	108,000
Costs of administration at 1 mark.....	7,200
Total.....	1,082,400

Even if insurance of dependents is included, Mayet estimates that maternity insurance will involve an increase of only 1.5 per cent. of the wages of members. On the basis of more liberal provisions than those which he has described, he has arrived at the figure of two per cent.

As an illustration of the experience of a German city the Leipsic figures may be cited. The Leipsic Sickness Insurance Society, in

addition to the regular benefits for members, furnishes medical care for the wives and children of members. With a membership of 206,180, expenditures were as follows in 1912:

	Expenditures in marks.	Average expenditure in marks for each member.
All items	8,913,153.28	43.24
Medical treatment	1,907,216.24	9.25
Medicines, etc.	961,351.57	4.66
Maternity pay	172,511.66	0.84

Under the items "medical treatment" and "medicines" the annual report does not separate the amount expended for maternity cases. It is not probable that this amount would appreciably increase the per capita cost of lying-in care. If the figures were obtainable, they would probably show that the cost of maternity in the Leipsic society, based on percentage of wages, was well within Mayet's estimate.

Any attempt to estimate the cost of a maternity insurance scheme in the United States is fraught with difficulty, owing to the absence of statistics of birth rates in a group which might be included in a sickness insurance society similar to those which have developed in Europe. If we assume the population birth rate of twenty-five per mille, we may construct a hypothetical table of costs approximately as follows, in a society of 100,000 members with an average income for each member of ten dollars a week.

Maternity benefits for 2,500 members at \$10 a week for eight weeks.....	\$200,000
Physician and nurse at \$25 a case.....	62,500
Incidental expenses at \$4 a case.....	10,000

Total.....\$272,500

Annual cost each member.....	\$2.725
Proportion of wage.....	0.52 per cent.

It should be noted here, however, that in Mayet's estimate he assumes a birthrate of twenty per mille for the members of the society, and of fifty-two per mille for the dependent wives of members. If, therefore, we double the birthrate in the foregoing estimate, the cost of maternity insurance would be 1.04 per cent. of wages, instead of 0.52 per cent. The estimate of twenty-five dollars for each case for the services of the physician and nurse is based upon the experience obtained in the maternity nursing service which the Metropolitan Life Insurance Company gives to its industrial policy holders.

If the amount were doubled, the cost for each member in the estimate given would be \$3.35, instead of \$2.72, and the proportion of wages would be 0.64, instead of 0.52 per cent. I think it quite safe to assume that in a scheme of sickness insurance in the United States composed of the same proportionate elements as are found in the Leipsic Sickness Insurance Society, the cost of maternity benefits and medical care would not be over one per cent of wages. If, however, the greater number of maternity cases were not of members, but of the dependent wives of members, and as such would not receive cash benefits, the cost of such an insurance scheme would be materially reduced.

It should be noted in passing that in Italy the maternity scheme is a more narrow one, membership being limited to women between ages fifteen and fifty years. Doubtless the Italian maternity insurance organization was created because of the lack of a sickness insurance system with which maternity insurance could be articulated. Whether such a maternity insurance can be made practicable and economical is an open question. It is as yet too early to make any definite statement with regard to the results obtained in Italy. The dubious efficiency of this plan is pointed out now for the reason that, if any scheme of maternity insurance is developed in the United States, the probability is that it will have to be a phase of a larger scheme of sickness insurance.

THE POSSIBILITY OF DEVELOPMENT IN THE UNITED STATES

It is reasonable to assume that this paper on maternity insurance would not have been asked for unless the need and the desire had been felt for the organization and development of some form of maternity insurance applicable to American conditions. The extent to which such a scheme will develop depends upon our attitude toward the general proposition of an extension of the work of mothers in industry.

While the number of women in industry has grown year by year, according to the Census reports, I think I may safely say that it has been the wish and the desire of economists, social students, and others, that industrial conditions in the United States be of such a kind that the father and the unmarried members of the family of working age may obtain wages sufficiently high to support the family. Thus the

mother would be permitted to attend to her natural duties at home—namely, the bearing and rearing of children, and the proper care of these children along the lines of efficient citizenship. This, in the minds of the American people, is the normal American family. We have not yet reached the point in our development where we are willing to admit that our industrial conditions are so bad, or our wage standards so low, that the earnings of the mother must supplement the wages of the other members of the family.

This attitude on our part has gone to the extent of legislation directed toward the care of mothers and children, through State aid, if they have lost their wage earner. Whatever may be the value of the legislation coming under the head of widows' pensions, there can be no doubt as to the purpose in view in enacting laws of this kind. The people of the United States hold that women who are mothers have the distinct function of bringing children into the world and of rearing them properly. It is recognized that the mother who has performed this duty to the State should not be burdened with the additional responsibility of the support of her children. This attitude is the definite basis of existing widows pensions legislation. For the present, at least, we have not accepted the European principle that the wife's earnings must be an element in the family budget. We still hold that a proper living standard should be maintained, if necessary, by wage increases of the other employable members of the family.

With this thought in mind, the question arises whether it would be desirable, even if it was feasible, to organize any scheme of maternity insurance after the models of European countries, whose primary purpose shall be the insurance of wage earning mothers. If we accept this principle, let us do so with our eyes wide open, and with the realization that insurance for this group is a make-shift—not insurance, but a better wage is the solution of this problem. It will be noted from the estimate of Mayet that the largest item in the cost of maternity insurance is that involved in the cash benefits given to the insured. The cost of medical services plays a comparatively minor part.

If we assume that, under our ideal condition, mothers shall not work, the great need of a scheme for maternity insurance immediately disappears. If, however, it is nevertheless deemed essential to develop a scheme of insurance under which maternity benefits may be paid to

working mothers, attention should be called at this time to the desirability of extending the benefits of such a scheme to other women as well. To do this most effectively it would be advisable, as has been suggested, not to attempt to organize a special maternity insurance, but to incorporate this into a general sickness insurance plan. The need for sickness insurance can no longer be denied. The next decade will probably see, in the United States, the development of a comprehensive system which will protect the worker against the contingencies of sickness and invalidity due to sickness. It would be quite simple, if it were found necessary, to incorporate in such a plan of sickness insurance the necessary provisions under which all women, whether employed or not, could be made beneficiaries at the time of maternity.

BIBLIOGRAPHY

1. Allgemeine Ortskrankenkasse für die Stadt Leipzig, Geschäftsbericht für das Jahr 1913, Leipzig, 1914.
2. Baum, Marie. Mutter und Kinderschutz in der Reichsversicherungsordnung, Soziale Praxis, xxii, cols. 1353-1358, Berlin, 1913.
3. Brandt, J. W. Wochenhilfe. Monatsschrift für Arbeiter und Angestellten-Versicherung, cols. 530-533, Berlin, 1914.
4. Broggi, Ugo. Zur Einrichtung einer staatlichen Mutterschaftsversicherung in Italien. Zeitschrift für die gesamte Versicherungs-Wissenschaft, Berlin, 1905, pp. 475-479.
5. Carr, A. S. Comyns; Garnett, W. H. Stuart; and Taylor, J. H. National Insurance. Preface by D. Lloyd George. London, 1912.
6. Commissioner of Labor. Workmen's Insurance and Compensation Systems in Europe. 24th Annual Report, 1909, Washington, D. C., 1911.
7. Eder. Endowment of Motherhood, London, 1908.
8. Frankel, Lee K.; and Dawson, Miles M. Workingmen's Insurance in Europe, New York, 1910.
9. Fürth, Henriette. Mutterschaftsversicherung, Jena, 1911.
10. Gutknecht, A. Bundesgesetz über die Kranken- und Unfall-Versicherung, Zürich, 1912.
11. Henderson, Charles R. Infant Welfare: Methods of Organization and Administration: I, Italy; II, France; III, Germany; IV, German Cities; Belgium. American Journal of Sociology, Nov. 1911, p. 289; Jan. 1912, p. 458; March 1912, p. 669; May 1912, p. 783.
12. Iduna. Die erste deutsche Gesellschaft, die Mutterschaftsversicherung einführt, Zeitschrift für die gesamte Versicherungs-Wissenschaft, Berlin, 1914, Rundschau, col. 249f.
13. Italie. Création d'une caisse de maternité. Bulletin des assurances sociales, Paris, 1908. pp. 594-597.
14. Italien. Mutterschaftsversicherung. Oesterreichische Zeitschrift für öffentliche und private Versicherung, Vienna, 1910, pp. 472-474.
15. Königreich Rumaenien. Gesetz über die Organisation der Handwerke, des Kleinkredits, und der Arbeitsversicherungen, Bucharest, 1912.
16. Kriegswochenhilfe: Sonderabdruck aus dem Reichs-Arbeitsblatt, Berlin, June, 1915.
17. Lüders, Else. Problem der Mutterschaftsversicherung. Zeitschrift für die gesamte Versicherungs-Wissenschaft, Berlin, 1905, pp. 20-34.
18. Manes, Alfred; Mentzel; and Schultz. Reichsversicherungsordnung. Handausgabe mit gemeinverständlichen Erläuterungen. Leipzig, 1912.

19. Marschner, Robert. Mutterschaftsversicherung vom Standpunkte der Versicherungs-Wissenschaft, Zeitschrift für die gesamte Versicherungs-Wissenschaft, Berlin, 1910, pp. 336-390
20. Maternity Insurance in Italy, Survey, New York, October 1912, p. 81
21. May, M. J., Die Mutterschaftsversicherung in Schweden. Bulletin des assurances sociales, Paris, 1912, p. 894f
22. Mayet, Paul. Mutterschaftsversicherung, Actes du VIII Congrès International des Assurances sociales, II, pp. 391-421, Rome, 1908
23. Mayet, Paul. Mutterschaftsversicherung nach den Beschlüssen des Bundes für Mutterschutz. Sonderabdruck aus dem Reformblatt für Arbeiter-Versicherung, Frankfurt a.M., 1907
24. Mayet, Paul. Säuglingsschutz, Mutterschutz, Mutterschaftsversicherung. München, 1908
25. Ministère du Travail et de la Prévoyance Sociale. Recueil de documents statistiques sur les sociétés de secours mutuel; Cartogrammes et graphiques, Paris, 1911
26. Monatsschrift für Arbeiter- und Angestellten-Versicherung, col. 120, Berlin, 1915
27. Mugdan. Wochenhilfe nach der Reichsversicherungsordnung, Soziale Praxis, xxiii, 993-996, Berlin, 1914
28. Mueller, Georg. Anwendung des sogenannten Genter Systems auf die Mutterschaftsversicherung, Soziale Praxis, xxii, pp. 449-453, Berlin, 1913
29. Mutter- und Kinderschutz in der Reichsversicherungsordnung, Soziale Praxis, xxii, 1353-1358, Berlin, 1913
30. Mutterschaftsversicherung. Zeitschrift für die gesamte Versicherungs-Wissenschaft, 249-250, Berlin, November, 1914
31. National Health Insurance Joint Committee. Report for 1912-1913 on the Administration of the National Insurance Act, London, 1913
32. National Health Insurance Committee. Report for 1913-1914 on the Administration of the National Insurance Act, London, 1914
33. Official Year Book of the Commonwealth of Australia, Containing Authoritative Statistics for the Years 1901-1914, Melbourne, 1915
34. Roumanie: Loi du 26 avril, 1913; loi du 31 mai, 1913; modifiant et completant la loi du 25 janvier, 1912; sur l'organisation des métiers, du crédit et des assurance ouvrières, Bulletin des assurances sociales, Dec. 1913, pp. 78-88
35. Serbie: Loi sur l'exercice du commerce de l'industrie, et des métiers, du 29 juin, 12 juillet 1910. Bulletin des assurances sociales, Paris, 1913, pp. 156-162
36. Smith, Thomas. Everybody's Guide to the National Insurance Act, 1911, London, 1912
37. Staatliche Mutterschaftsunterstützung in Australien, Soziale Praxis, xxii, col. 1241, Berlin, 1913
38. Stone, Gilbert. Questions and Answers on National Insurance, London, 1912
39. Suède. Les progrès des caisses de maladies et le décret du 6 decembre, 1912; sur l'encouragement à l'assurance maternelle. Bulletin des assurances sociales, Paris, 1914, p.148f.
40. United States Department of Labor. Children's Bureau: Laws Relating to "Mother's Pensions" in the United States, Denmark, and New Zealand, Washington, 1914
41. Borghat, Richard van der. Mutterschaftsversicherung, Versicherungsllexikon, cols. 852-858, Tübingen, 1909.
42. Borosini. Victor von. What European Nations Are Doing in Maternity Insurance, Survey, 1914, p 774f.

TO WHAT EXTENT MAY THE MOTHER SUBSTITUTE PROPRIETARY PREPARATIONS FOR THE ADVICE OF A PHYSICIAN?

CARL L. ALSBERG, M. D., Washington, D. C.

In seeking a reply to this question, we must understand that we cannot satisfy everybody, that no solution can possibly prove equal to the needs of all those who ask for a solution. We are in the position of being obliged to get some result with the tools which we have. Public welfare is asking of us that we employ these tools and endeavor to fabricate with them a better understanding of what we shall advise mothers to do in caring for their children in sickness.

Leaving out of consideration fear, which, in an interesting paper by Dr. Nichols, of Washington, is shown to bear a psychological relation to the use of proprietaries, the ordinary mother doses her children because of two motives—economy and convenience, or what she imagines constitute economy and convenience. She buys a proprietary mixture because she wishes to avoid the expense of a physician's fee or the trouble of calling in medical opinion for a slight ailment which she can treat, she thinks, just as well herself.

While she may sometimes thus treat a sick child, behold a recovery largely produced, as it is always largely produced, by nature and find that she has paid out less money than she would have paid had she consulted a physician, she has by no means obtained information which will answer her question. She is in the position of the winning gambler who will lose in the end if he invents a system to beat that which cannot be beaten in the long run. In the first place, the actual cost of dosing a child through more or less protracted ill-health will exceed what would be paid by employing a conscientious and decent medical man, since most proprietaries sell at a price far beyond that of a figure which would permit of the purchase of the ingredient drugs and allow a good margin for profit. Add to this fact the danger incurred by temporizing with an illness of unknown nature and a severity which cannot be guessed at by an untrained person. Examples of diseases in which great harm may occur by reason of delay and temporizing are diphtheria, scarlet fever and other infectious maladies; diarrheal disease in infants; and parasitic skin and eye diseases, as

well as the venereal affections. Particularly in the diarrheal conditions of infancy and early childhood may harm result through use of narcotic mixtures. Here the dangers of dallying with serious illness are added to by the evil effects of narcotic and habit-forming substances.

We of this present day are so accustomed to instruction concerning the general matter of infectious diseases that we must necessarily wonder how anyone can suppose them to be at all amenable to the bargain-counter methods of the ready-made mixture. That there may still be considerable need of more general knowledge in this direction, however, there can be no doubt. In this connection I must quote verbatim from a label taken from a proprietary preparation actually offered for sale to the public: "In fatal diseases, such as Smallpox, Yellow Fever, Asiatic Cholera, Typhoid Fever, and Fever and Ague, it is a life preserver that will cure and protect you against attacks of these fatal diseases; for it is the only remedial agent in existence that will certainly cure and absolutely prevent these diseases."

There is no real economy in using proprietaries where such diseases may be developing or progressing, since, aside from the individual relation, the chance of permitting an epidemic to occur must be taken into account. Delayed quarantine may work great danger and sorrow to the public, and the so-called "expense" of treating a single case of undetermined disease become thus incalculable.

The question of convenience is similarly one of merely taking chances. The mother can never know in advance just how convenient or inconvenient insufficient treatment of illness is going to prove.

Physicians have much to do with the question. In the first place, there are all sorts of physicians, from the man who owns and sells proprietaries himself, to the man whose attitude to the proprietary question is one of persecutory fanaticism. The use and commendation, by physicians, of drugs concerning which there has been little known, has in the past been and to a certain extent even today is responsible for the erection of a monumental collection of misinformation. Physicians have led in evil as well as in good. Dr. Williams, in his discussion this afternoon, mentioned the historical relations of the expression "midwife." As an illustration pertinent to the matter of drug tradition, consider the following statement which constitutes one of the theses advanced in the year 1855. The author is Francisco Osatary,

who presents this thesis in connection with a dissertation submitted for the doctorate at the University of Jena, the subject being the drug *Carduus benedictus*, which, on account of historical and traditional support, has been made the basis of several proprietaries. I give the translation from the original, which is of a Latinity altogether musical: "Diseases are cured not always by a course of action but sometimes by waiting; nature is often by itself able, art never by itself able, to cure disease." This truth is often diverted to unfortunate uses, by physicians as well as by dealers. We still have with us the physician who finds it easier to prescribe a proprietary than to write a properly constructed prescription containing but few ingredients and those few such as have been investigated.

Conditions of medical service are especially difficult in rural localities. This situation is taken advantage of by dealers in proprietaries, whose arguments assume a certain plausibility because of the partial truth which they contain. Permit me to give one or two quotations which may illustrate the physician's position as taken by the thinking and educated representative of medicine and also illuminate the other side. The first is from a modern writer, Foussagrives, J. B., "Treatise on Applied Therapeutics:" "In fact I do not know of an abasement more profound and a condition more painful than practicing medicine without believing in it and dragging oneself along without conviction through formulas which convey nothing to the mind, and persisting in a routine which dishonors and which enervates."

The unsatisfactory situation of medical practice is taken up by the dealer in the following representations, taken each verbatim from the advertising material of a proprietary:

"A laboring man with a family cannot very well afford to call in a doctor, then pay for an expensive prescription, every time he, his wife, or one of his children has a headache, is constipated, has poor appetite, sallow color, pimples, sluggish liver or is slightly feverish and cross—yet these ailments should be treated else they may lead to serious illness."

Again: "In every home conditions often develop that require medical attention, and a little knowledge of practical home treatment often removes the necessity of calling in a physician."

These quotations well illustrate the fact that society must yet understand just what relation the medical man should assume in his

function to the public and how far his office is that of a licensee provided with definite limits and official status. The question is one of standardizing the practice of medicine and is itself no easy problem.

Private and public philanthropy tend to limit the use of proprietaries because they are concerned with dispensary or other free, or nearly free, medical service, which furnishes drugs at cost and in quantities corresponding to the actual need. Organizations which deal with public charities, nursing, child welfare and the like are made keenly to appreciate the evils attending the use, by mothers, of narcotic preparations. They understand the uselessness of proprietaries in a situation where the mother may have the very best medical attention by simple application to the authorities of a dispensary, hospital, nursing or other local association. They may become too radical through lack of appreciation of the broad economic question which is the crux of the difficulty.

State and Federal agencies are chiefly concerned with proprietaries in their legal relation. However natural the desire for reforms may be, the fact that law has been placed upon the legislative pillars must never be lost sight of. Every man has rights which the law is designed to safeguard and administrators should maintain absolute fairness to interested parties. Jabertism, as exemplified and named in *Les Misérables*, is not a good way of dealing with human creatures.

The law reflects at any time the effective consensus of public opinion. Education alone can properly change an inadequate legislative expression. If public opinion is not sufficient to provide effectiveness at any epoch, in relation to a given condition, the condition will persist until force of necessity creates a pressure which combined obstacles of self-interest, ignorance, carelessness and inertia will be unable to resist.

The dealer has a bread and butter interest in the proprietary or, it may be, an automobile, steam yacht, or marble palace interest. He may be ignorant or well-educated; he often appears to have had a medical training. In any event, since his products have been subjected to an increasing criticism, he may have to struggle more and more strenuously.

However he may be regarded, the fact must not be lost sight of that any evil inherent in his line of business is a survival from times ruled by individualism. If the public believes that his profession is

nefarious and that it should be suppressed, it will be suppressed; if the public is in fact eternally a gullible public, then, in spite of reform influences there will be no control of the sale of nostrums.

Present indications tend to show that the public will gradually solve the proprietary question. Wherever local conditions accentuate the idea that proprietaries are uneconomical and otherwise undesirable, in that place there will be a lessened demand for such preparations. The effect in one such focus, if sufficiently multiplied, will appear as a total of disapproval having a corresponding total increase of weight against the proprietary industry.

If we believe that doing away with proprietaries is necessary, let us understand also the necessity for providing for the economic forces which must be diverted into channels other than those now occupied by capital and labor requiring an outlet.

The proprietary question will evolve—is evolving—its solution along with child labor, social hygiene, eugenics, prison reform and every other subject upon which the public is looking with a desire for improvement. Discussion of the proprietary question by this Association marks the application of an educational lever to a weight of public indifference. The weight will be removed and the proprietary industry transferred to its suitable position in the public edifice—or discarded altogether if such be the public will—just in proportion to the enlightenment which such discussion, often repeated, throws upon the matter and so serves as an illuminant of the progressing human mind.

DISCUSSION

Miss Olga L. Halsey, of the American Association for Labor Legislation, New York: Though I haven't Dr. Frankel's very intimate knowledge of insurance problems, I am here tonight to say just a few words in addition to Dr. Frankel's speech and from the point of view of a woman who has watched the maternity benefit at work in Great Britain, where under the National Insurance Act, the wife of every insured workman receives a cash benefit of \$7.50, and if the woman is insured herself, she receives an additional benefit of \$7.50. From my observations in England, I have drawn the conclusion that the function of the maternity benefit is two-fold, that of providing a cash benefit and that of providing medical care. The actual cash benefit may be of two kinds; it may be a cash benefit which lasts as long as the mother is unable to work, whether four, six or eight weeks, varying with each case; or it may be a cash benefit for a limited period of time, that is a flat rate of 30 shillings, as in

Great Britain. If the benefit is made in accordance with the duration of the incapacity to work, the insurance problem is much more difficult because there is the uncertainty as to the actual birthrate and the added uncertainty as to the duration of incapacity. Dr. Frankel probably knows very well that there is very little information as to the actual duration of incapacity of pregnant women during and after confinement, so that this form of insurance is a very difficult problem. But the flat rate benefit, as it is carried out in Great Britain, is possible, and that feature of the British Insurance Act of giving a flat rate benefit of \$7.50 to the wife of every insured workman, has been one of the most successful benefits of the Act. It has been financially possible and has met with great popular success. I think the women among whom I was working really valued that maternity benefit more than any other benefit which the Act offered. But much more important, as Dr. Frankel has already pointed out, is the necessity of giving medical care to the mother. The provision of medical care is a necessity if the health of the mother and of the child is to be conserved, and authorities in Great Britain who are concerned with the economic aspects of the ill health of working women are now attributing some of that ill health of married working women to their inadequate attendance at previous childbirths. In our own country, where nearly 40 per cent of the childbirths are attended by midwives and only 13 states have attempted to examine midwives before permitting them to practice, the problem is even more pressing than in Great Britain, and it seems essential that some steps should be taken at this time. The American Association for Labor Legislation, with headquarters in New York, has published the draft of an Act for Health Insurance, and upon the advice of experts, the Association proposes to include a maternity benefit in a measure for compulsory health insurance, a theoretical proposition with which Dr. Frankel agrees, as he has said tonight. The plan we have in mind gives to the wife of the insured workman, even though she herself is not insured, medical care or attendance at childbirth, and to the insured mother, in addition to medical care, a cash benefit for a fixed and limited period. I am very glad to be able to present, just in this brief space of time, the work of our Association and to ask for your criticism of the bill as it is put before the public and to urge the cooperation of so large and influential a body as the American Association for Study and Prevention of Infant Mortality.

The Chairman: I would like to ask Dr. Frankel whether the legislation that has been enacted in other countries makes it more certain that help will go to people at the time they need it? One of the nurses engaged in this work told me just a day or two ago that recently there had come to her attention a mother who had just previously given birth to her eighth child and that she had never had any attendant at the birth of any of these children; six of the children, I believe it was, had died. It seems almost incredible that such things could happen, and could keep on happening, and I wonder if, in countries where they have these measures, knowledge of help that is available gets over to a greater percentage of the people?

Dr. Frankel: I can answer that question best by citing the illustration I referred to this evening, of the Leipsic Sickness Insurance Association, with which I am best acquainted from personal study. Here is a group of working men and women representing practically the entire city of Leipsic; in other words, under the scheme of organization there, there is one large sickness society to which every workman and workwoman in the city earning less than a certain sum, must belong. They pay their dues—the employer pays their dues and his dues; they have nothing to do with it; their deductions are made from their wages and weekly or monthly remittances are sent to the central office. Every individual insuring under that scheme and privilege knows that, not as a privilege but as a right, he may demand medical attention whenever required, and may call upon a physician for any illness whatever. He receives hospital treatment if needed and may even, in urgent cases, be sent away to the sanitarium or health resort or cure, as deemed necessary. Under those conditions, a woman, if she becomes confined, knows that she has the right to apply for medical benefit and will receive certain cash benefits during eight weeks, and the member knows that his wife, if she becomes confined, will receive proper medical service, and his children—in other words, it is a family affair and members apply for medical treatment and cash benefits.

Dr. R. B. Hoobler, Detroit: I would like to inquire from Dr. Frankel if he has any definite figures to show that maternity insurance reduces the death rate of infants? It seems to me that is an exceedingly important thing for us to know; if that has been tried to the extent it has, there should be some very definite figures which we can use.

Dr. Frankel: There are none, Mr. Kingsley.

The Chairman: Dr. Cressy L. Wilbur, Director of the Division of Vital Statistics, of the New York State Department of Health, is with us. May we hear from you, Doctor, as to progress that is being made in certain phases of this work?

Dr. Wilbur: I appreciate very highly the privilege of saying a word to you tonight on what stands at the foundation of all our efforts for infant mortality, namely, the registration of vital statistics, and more especially the thorough and efficient registration of births. It would seem hardly credible to an observer in this state who has read, for instance, the recent paper contributed by Dr. Dixon to the Journal of the American Medical Association, showing the decrease in the mortality from typhoid fever in Pennsylvania, to know that so recently as eight or ten years ago, this great Commonwealth of Pennsylvania had no vital statistics, or practically no vital statistics, either of births or deaths. I had the honor, as a representative of the U. S. Bureau of the Census, to be instrumental in the drafting of the Pennsylvania law and in the passage of that law before the Legislature, I think of 1905; and later when I was appointed

Chief Statistician of the Census, it was my first task and my most pleasant task to proceed from Washington to Harrisburg to examine into the operation of the Pennsylvania law as conducted by Dr. Wilmer R. Batt, the State Registrar, and to recommend the admission of Pennsylvania to the registration area for deaths. It was the first thorough test of what is known as the Model Registration Law, that law which was drafted on principles adopted by the American Public Health Association and by the American Medical Association and recommended by the Bureau of the Census, and which has since proved its worth in many states, including among them your neighboring State of New York in which, since April 7th of last year, I have had the honor to be the Director of Vital Statistics under Dr. Biggs. I say Pennsylvania was admitted to the registration area for deaths, but the registration of births was still defective in Pennsylvania, as it has been and is in many states, and the registration of births is an indispensable element without which we cannot reckon the true infant mortality; hence it is so essential, as the foundation of the operations of this Association and so necessary in all the modern life-saving work connected with the welfare of infants and children. Why should not Pennsylvania, why should not every state in the Union have complete registration of births? The answer is very simple: *Because the law is not enforced with the penalty of the law applying equally on physicians and midwives who violate that law.* Such a law has never been enforced thoroughly, with state-wide application for all defects of registration and delayed registration of births, in the United States. Pennsylvania has come nearest to the enforcing of such a law, and it is due to the untiring activity of Dr. Batt, supported by Dr. Dixon as Commissioner of Public Health, that we have been encouraged to believe that a law for the registration of births *could* be effectively enforced. Now I come to you with a very pleasant message from New York. I read this morning in the meeting of the Association the letter from my chief, Dr. Hermann M. Biggs, State Commissioner of Health of New York, directing and authorizing me to prosecute every physician and midwife in the State of New York under his jurisdiction, which is exclusive of the City of New York, who fails or neglects for any reason whatever to file a proper and complete birth certificate within five (5) days after birth; and that is five days less than the Pennsylvania limit. I have been in conference with Mr. Lappin, Dr. Dixon and Dr. Batt, and the Bureau of the Census has declared that it will not admit to the registration area for births any state that does not enforce its own law and require births to be filed within the limit set by the state law, with punishment by fine, and if necessary by imprisonment, of any physician or midwife who violates that law. The State of New York will qualify under that edict, and I believe the State of Pennsylvania is now ready to do so, and I therefore am glad to present this fact and call upon you in the name of the Association for Study and Prevention of Infant Mortality, in the name of the American Medical Association, in the name of the American Public Health Association, and in the name of all interested in vital statistics in this country, to *demand*, what your State Registrars and Commissioners of Health are very desirous of doing, that every physician in your membership who violates the law, shall be prosecuted and punished.

Dr. A. B. Hirsh, Philadelphia: An intelligent audience like this should not leave tonight's meeting carrying away the remark just made which, partly understood only, carries a stigma on the medical profession. It is the medical profession itself that initiated and has for years been carrying on an active propaganda for an effective vital statistics law in Pennsylvania, based on which we can hope for the greatest reduction in mortality rates generally and infant mortality in particular. The defect in the present statute is the fact that the physician is called on, is compelled under penalty, to hand in a certificate of birth within a specified time from the time of birth of the child, for which service no payment whatever is made to that physician. Such an injustice does not exist in any other Commonwealth. Just within the past few weeks a law has become effective in the State of New York by which physicians *are* recompensed for their labor in making out such certificates; and it is a labor beyond any question. The hard-worked physician, going day and night, treating a great variety of conditions, medical, surgical and obstetrical, is often worn out with the endless details of his practice and finds it difficult at times to do the slight additional amount of writing that is called for by such a certificate after which this must be taken or sent by him to the local registry office. I rise particularly to ask for the help of a strong public sentiment to bring about justice to the hard-worked physicians throughout the State of Pennsylvania in this direction. I want to say that we do not find any of our legal friends or any of our merchants or those in any other calling, forced to give something for nothing and then being actually penalized for failing to do so. I would appeal for the aid of your good opinion, when the proposition is again before the Legislature, to bring about justice in this direction.

Dr. Charles J. Hastings, Toronto: In listening to the various addresses tonight and the expressions of opinion in connection therewith, I was forcibly reminded of the statement made by General Gorgas a few days ago, that if he were given but one means of controlling health conditions on this continent, he would choose, for that one means, a doubling of the revenue of all the homes of the laboring class. Now we have heard considerable tonight about the one-room dwelling and the infant mortality in connection with it, and about the two, three and four-room dwellings and the infant mortality in connection therewith. What I would like to emphasize is the great danger of our attaching too much significance to the one-room dwelling. We all deplore the idea of the one-room dwelling, but we must remember that it is but one factor and we must not place too much stress upon it lest we forget the other conditions associated with it that are of even more significance. People who occupy a one-room dwelling are doing so because of their small income; and there are many factors associated with the inadequate income which make the mortality in the one-room dwelling so much larger than in the other places. We have evidence of that in the statement made here tonight that where the income is only \$11 a week, the infant mortality was practically double that where the income was

\$22 a week; so I think it is extremely important that we place the blame where it belongs and see that we do not attach too much significance to dwellings, but take into consideration all the conditions that make it necessary for these people to occupy such dwellings. The whole thing therefore seems to revolve around the family income. It is alleged that 51 persons control two-thirds of all the wealth and that 450 control nine-tenths of all the wealth of this continent—it is easy to understand that such an unjust distribution of wealth as that does not make for good health or good government.

Mrs. Wm. Lowell Putnam, Boston: I want only to say that we have a clinic in the Women's Municipal League, of Boston, where we give to poor women the very best obstetrical care for the same price which Mr. Kingsley has spoken of as being the price paid to midwives—from \$10 to \$15. They have the best trained obstetricians and the nursing care of the district Nursing Association, and we feel very strongly that the poorer the women the better should be their care, because they cannot have the advantages afterwards that the richer women can have, nor can their children. Therefore their care at childbirth and beforehand (and this care that I speak of, this obstetrical care, includes prenatal care as well) should be of the very best, and we find that the price of \$10 to \$15 will make such work self-supporting; it pays the doctors and pays the nurses what they need as their own living wage.

Dr. Albert E. Roussel, Philadelphia: I believe at the introduction of compulsory insurance in England—that the greater number of the members who belong to the British Medical Association and the better class of members refused to take part in this compulsory medical insurance law, not only on account of the various objections in connection therewith, but on account of the poor pay. I want to ask whether, since that time, things have changed in this particular connection? I take it, if the legislators are to name our pay in connection with compulsory insurance of any kind, that we will probably all have to go into one, two, three or four-room dwellings.

Dr. Murray, Philadelphia: I am very glad to be here tonight, very glad to hear Dr. Hastings bring our remarks back to where they belong—poverty. I think that is the one word around which the whole situation seems to revolve. We are all pretty well familiar with the contributing causes, such as housing and sanitation, hygienic conditions, etc., and I am particularly grateful to Dr. Frankel for presenting a means which seems to offer some hope of alleviating the condition of poverty. I hope that this country, either by states or by the nation as a whole, will eventually adopt some measure that can be used for alleviating the conditions which surround childbirth and will make the hope of future citizens greater.

Miss Halsey: I want to say just a word about poverty. It is a question of poverty, and the trouble is we cannot raise wages all at once. Through an insurance scheme, we can make it possible to help make provision for those who need medical care; the burden of sickness will be distributed and in that way the burden of poverty will also be distributed. The Association for Labor Legislation is not trying to reduce the doctors to poverty; the British Medical Association did protest against the proposed rates of payment which were fixed by the Insurance Act when it was first passed. Since that time the rate of payment has been substantially increased. It was increased before the doctors actually began to practice, so that the rate of payment for doctors is nearly twice what they were receiving before on a per capita basis of the whole population, and in industrial districts where doctors can have a large practice, the rate of remuneration is entirely satisfactory.

Dr. W. K. Shea, Philadelphia: I think the previous speaker was correct in saying that the British Medical Association did object very much and held a great many meetings and there was some change—a great many changes—made in the remuneration, but if I am correct now, I think that the per capita pay to the medical officer is 7 shillings and 6 pence a head, which is \$1.75 per annum for each case, a little over that, and there is still a great deal of dissatisfaction. I think a great deal of dissatisfaction comes from the fact that when people moved from one district to another, there was some difficulty as to the treatment and to whom that patient should be referred. He had some difficulty in getting care in his new place for a certain length of time, and also, if he was on the panel of a certain physician and was dissatisfied with his treatment, he had difficulty in going from that physician to another. I do not think that, even at present, that panel question is really so very satisfactory. I don't know how it is acting now, because a great many of the men who are panel doctors are out in the medical service of the army. I would like to know if anyone can answer that question.

The Chairman: I do not know whether there is anyone here that can answer that. I suppose that any scheme worked out will have more or less details of that sort that will take some time to adjust, but on the whole, according to what Dr. Frankel has said, these measures seem to be of practical application. We shall have to draw this meeting to a close, but I would like to say, on behalf of the Committee on Economic Aspects of Infant Mortality that we feel that a number of subjects have been opened up in this discussion which may well command the attention of this Association for some time. There is the question of legislation of which Miss Halsey has spoken, and the question of maternity insurance that Dr. Frankel has opened up so ably tonight, and then closely associated with the whole subject is the question of a minimum wage, and of the regulation of the work of women. As I stated in the beginning, it seems

to me that the workers in this field have taken up this problem in such a way that their findings ought to receive much consideration, because they did not start with demanding the millenium, but just took the situation as they found it. They have achieved these wonderful results by getting people to adapt themselves better to their own circumstances and by taking to them the knowledge the community now has. This has brought the whole problem to the secondary stage—to all these broad questions that we have been discussing tonight, and that certainly demand the community's acting together. We have enjoyed greatly the hospitality, this evening, of the Philadelphia County Medical Society.

SESSION ON EUGENICS

Thursday, November 11, 1915, 2.30-4.30 p. m.

COMMITTEE

Chairman, DR. WM. F. SNOW, New York City

DR. RICHARD C. CABOT, Boston

PROF. H. E. JORDAN, Charlottesville

DR. LANGLEY PORTER, San Francisco

DR. GEORGE B. YOUNG, Norfolk

Topic: Factors in Improving the Race and the Opportunities for Success of Individuals of Each Generation

Methods of Reducing the Number of Births of Children Receiving a Faulty Heritage from their Parents

The Problem of Prenatal Life and Influences which may Favorably Affect this Period of the Child's Growth

Preparation for Motherhood

Methods of Developing or Modifying in Each Child During His Growth to Maturity the Heritage Received from His Parents

VALUE OF NEGATIVE EUGENICS

**Measures That Are Possible Are Decidedly Worth Taking but Must Not Be
Expected to Cause Any Great Amount of Race Betterment—
Difficulties in the Way of Constructive Eugenics**

EDWIN G. CONKLIN. Ph. D., Professor of Biology, Princeton University

A great many people believe that all social movements intended to increase the comforts and the safety of living, the reduction of disease and the prevention of infant mortality, are to be classed as eugenical. As a matter of fact, and strictly speaking, that is not the case. Eugenics has to do with good heredity and nothing more; good environment really has but very little part, if any at all, in the subject of eugenics. Of course, there are a good many people who still maintain that environment somehow, in time, comes to enter into heredity, that the child who is brought up in a good environment somehow comes to have a different germ plasm and passes it on to the next generation. A great deal of work has been done along this line during the past fifteen or twenty years, and it is the almost universal opinion of those who have worked upon the subject that there is no evidence that good environment brings about an improvement in heredity. This afternoon I shall make a very sharp distinction between heredity and environment; what I have to say to you concerns eugenics or good heredity and the method of decreasing the number of those individuals in human society who have had a bad inheritance.

No well-informed person doubts that the principles of heredity and evolution apply to man as well as to the lower organisms and in spite of much controversy with respect to the importance of natural selection in evolution, I make bold to assert that no other principle has yet been suggested of equal importance with this, and that the elimination of the unfit affords not only the only natural explanation for the existence of fitness, but also the only means by which breeders have been able to improve domesticated animals and cultivated plants.

The only possible control which mankind can exercise over the production of improved races of lower organisms or of men lies in the elimination from reproduction of the less favorable variations which are furnished by nature. For it has become more and more clear in recent years that, while environment exercises a great influence over the development of the individual, its influence on the germ plasm or the hereditary characteristics of the race is relatively slight and in general is not of a definite or a specific character. Probably environment may under certain circumstances modify the germ plasm, but there is no evidence that good environment will produce good modifications and bad environment bad modifications in this hereditary substance. Consequently, the only method which is left to man for improving races is found in sorting out the favorable varieties from the unfavorable ones which are furnished by nature. If the human race is to be permanently improved in its inherited characteristics, there is no doubt that it must be accomplished in the same way in which man has made improvements in the various races of domesticated animals and cultivated plants.

Fortunately, or unfortunately, the methods which breeders use cannot be rigidly applied in the case of man. It is possible for breeders to eliminate from reproduction all except the very best stocks, and this is really essential if evolution is to be guided in a definite direction. If only the very worst are eliminated in each generation, the standard of a race is merely maintained, but the more severe the elimination is, the more does it become a directing factor in evolution. This may be illustrated by a diagram in which variations in all directions are represented by lines radiating from a central point. If only those lines are blocked which lead in one direction, the center of radiation or "mode" would be but slightly changed in successive generations. But if all lines are blocked but those which lead in one particular direction, the mode will be shifted in that direction in succeeding generations. Therefore the value of selection as a directing factor in evolution depends on its severity.

MAINTAINING THE LEVEL

In the case of man, however, even the most enthusiastic eugenicists have never proposed to cut off from the possibility of reproduction all human stocks except the very best, and if only the very worst

stocks are thus eliminated, we must face the conclusion that practically all that can be accomplished will be to preserve the race at its present level. The ecstatic visions of those eugenicists who look forward to a world of supermen to be produced by this method of eliminating from reproduction the worst human stocks, can be regarded only as iridescent dreams, impossible of fulfillment. It is impossible, then, to apply rigidly to man the methods of animal and plant breeders. Society cannot be expected to eliminate from reproduction all but the very best lines. The great majority of mankind cannot be expected voluntarily to efface itself. The most that can be hoped for is that the great mediocre majority may eliminate from reproduction a very small minority of the worst individuals.

Furthermore, other and perhaps even more serious objections to the views of extreme eugenicists are to be found in human ideals of morality. Even for the laudable purpose of producing a race of supermen, mankind will probably never consent to be reduced to the morality of the breeding-pen with a total disregard of marriage and monogamy. The geneticist who has dealt only with chickens or rabbits or cattle is apt to overlook the vast difference between controlling reproduction in lower animals and in the case of man where restraints must be self-imposed.

Another fundamental difficulty in breeding a better race of men is to be found in a lack of uniform ideals. A breeder of domestic animals lives long enough to develop certain races and see them well established, but the devotee of eugenics cannot be sure that his or her ideals will be followed in succeeding generations. The father of Simon Newcomb is said to have walked through the length and breadth of Nova Scotia seeking for himself a suitable mate, but neither he nor any other eugenicist could be sure that his descendants would follow a similar course, and long continued selection along particular lines must be practiced if the race is to be permanently improved. Mankind is such a mongrel mixture, and it is so impracticable to exercise a strict control over the breeding of men, that it is hopeless to expect to get pure or homozygous stocks except with respect to a very few characters and then only after long selection.

But granting all these difficulties which confront the eugenicist, there is no doubt that something may be gained by eliminating the

worst human kinds from the possibility of reproduction, even though no great improvement in the human race can be expected as a result of such a feeble measure. The question which has been assigned to me on this occasion is "How the Number of Births of Children Receiving a Faulty Heritage from their Parents May Be Reduced?" Strictly speaking, there is no one who does not receive a faulty heritage, at least in some respects; "there is none perfect, no not one." But there are some whose heritage is so faulty that they constitute a menace to society, and it is doubtless to these that this question refers. There are large numbers of persons, loosely called "defectives," in modern society, and it seems to be a question whether they are not actually increasing in number. This increase may be due, however, to a more accurate recognition and classification of defectives than prevailed formerly. There is no clearly and sharply defined class of defectives, but human populations show every gradation from the highest and most efficient individuals to the lowest and worst; strictly speaking, defectives may be said to include all individuals below the average, from subnormals to monsters. In general all defectives are shorter lived than normals, and the more serious the defect the shorter the life. The worst monstrosities die in the early stages of development, others live but a short time after birth, and none of these ever leaves offspring. Only those defectives in whom abnormalities are relatively slight ever reproduce. Nature has thus erected an insuperable barrier against the propagation of the worst.

ONE EFFECT OF CHARITY

Nevertheless a good many defectives survive in modern society and are capable of reproduction who would have perished in more primitive society before reaching maturity. In the most highly civilized states the lives of these unfortunates are preserved by charity, and in not a few they are allowed to reproduce, and thus natural selection, the great law of evolution and progress, is set at naught. It is within the power of society to eliminate from reproduction this dependent class.

How can the number of defectives born from defective parents be reduced? Evidently if these defects are hereditary it can be done only by preventing their breeding, since in modern society defectives can-

not be destroyed by Spartan methods. Many ways have been recommended and a few have been tried to accomplish this end, but they all come under two categories: (1) Segregation to prevent the union of the sexes, (2) sterilization or other means to prevent conception following sexual union. Such methods if rigidly applied to all defective or abnormal persons would doubtless reduce the number of "children receiving a faulty heritage from their parents," but since it is impossible for reasons indicated above to apply these methods to any except the most seriously defective class, which is usually dependent upon public care or private charity, and since in general the birth rate at present among such defectives is not large, no great change in the number of births of defective children through such elimination need be anticipated. And this is especially true since children inherit not merely the traits which their parents show, but also those family traits which are carried along in the germ plasm in a latent or recessive form, waiting only for an opportunity to become patent. The study of heredity shows that the normal brothers and sisters, or even more distant relatives, of defective persons may carry the defect in their germ plasm and may transmit it to their descendants though not showing it themselves. Such persons are more dangerous to society than the defectives themselves. And yet it is probably impossible rigidly to exclude them from reproduction.

Finally, it is usually difficult and often impossible to decide whether a given defect is due to heredity or to environment; if it is due to the latter the methods adopted for its prevention must be wholly different from what they would be if it is due to the former cause. Experiments on guinea-pigs, rabbits and other animals show that serious defects may be produced in off-spring by the action of alcohol and drugs on either or both of the parents before conception, and Forel with his wide experience in such matters does not hesitate to maintain that the effect of alcohol on either or both of the parents at the time of conception is one of the most fruitful causes of monstrous or defective children. No doubt there are many other environmental causes of defects in children, such as infection, malnutrition, injury, etc., at various stages in their development.

Dr. Henry H. Goddard, of the Training School at Vineland, N. J., has kindly furnished me with the following figures regarding the men-

tal condition, so far as it has been investigated, of the parents of the inmates of that institution:

Number of families investigated.....	337	or	100	per cent
Both parents feeble-minded.....	57	or	16.9	per cent
One parent feeble-minded and other normal.....	43	or	12.8	per cent
One parent feeble-minded and other unknown.....	54	or	16.0	per cent
Family history of feeble-mindedness.....	154	or	45.7	per cent
Both parents normal.....	90	or	26.7	per cent
One parent normal, the other unknown.....	47	or	13.95	per cent
Both parents unknown.....	46	or	13.65	per cent

I am indebted to Dr. Martin W. Barr, of the Pennsylvania Training School at Elwyn, Pa., for an extensive etiological table which he has prepared showing the probable causes of mental defect in more than 4,000 cases, from which I quote the following summaries:

	No. of cases	Percentage
Causes acting before birth.....	2,651	65.45
Family History of Idiocy and Imbecility.....		
.....1,030 or 25.43 per cent		
Causes acting at birth.....	186	4.59
Causes acting after birth.....	1,213	29.96
Totals.....	4,050	100

Dr. George Mogridge, Superintendent of the Iowa Institution for Feeble-Minded Children, has kindly supplied me with the following figures regarding the reported mental condition of the parents of persons who have been admitted to that institution, at the same time warning me that such statistics are not altogether reliable:

Number of families investigated.....	1,701	or	100.0	per cent
Inmates who have both parents feeble-minded.....	66	or	3.88	per cent
One parent feeble-minded and other normal or unknown	134	or	7.88	per cent
Number with both parents normal.....	513	or	30.16	per cent
Number with both parents unknown.....	876	or	51.5	per cent
Insanity in one or both parents.....	112	or	6.58	per cent

These statistics and many others that have been collected prove conclusively that feeble-mindedness is frequently inherited, but they also show that it is often due to environmental causes. In short, what we call feeble-mindedness is no simple thing; some persons are born fools, some acquire foolishness, and some have foolishness thrust upon them. Defects, whether due to heredity or to environment, are multitudinous. Even with apparently good heredity and good

environment the children of many excellent people are more or less defective, and at present we know of no means to reduce the number of such mistakes of nature. The eugenicist can sometimes "explain" such mistakes after they have occurred, though unable to predict them before the event. Indeed eugenical explanations are apt to be more convincing and accurate than eugenical prophecy; it is well to have eugenical insurance against having defective children, but it is advisable not to have all your insurance in one company.

DISCUSSION

The Chairman: I will call upon our president, Mr. Folks, to open the discussion.

Mr. Homer Folks, New York: Proposals concerning the segregation or sterilization of the obviously or undeniably defective persons have been urged upon legislatures from time to time and it seems to me that nothing has been said which questions their value or validity. In New York we have had a law looking toward sterilization—I rather expected Dr. Conklin to discuss legislation of that type—the trend of legislation seems to be in that direction in New York. Although the enforcement of the law has been urged, it remains a dead letter so far. On the other hand, it seems to me that the emphasis becomes stronger and stronger upon the necessity for the segregation of the mental defectives. I think that all who are interested in eugenics will agree that if thorough segregation can be accomplished of the mentally deficient, during the child-bearing period, it is so much to the good. Various states are making more or less progress in this direction. New York is coming toward the front rank and it is the present consensus of opinion among social workers in New York that one of the most important things we have to do, is to bring about the segregation of the undeniably mentally deficient—that term is a very loose one, I must admit, and the instruments of measurement are all approximate. I am interested to know whether this viewpoint receives confirmation from such a student of the subject as Professor Conklin.

The Chairman: Prof. Conklin, in answering other questions that have been raised, will you express your opinion on the relative value of endeavors to promote more intelligent mating as compared with compulsory segregation?

Prof. Conklin: It may seem to some of you that I have taken a very pessimistic view of this question. I am glad to be able to say that I believe that much can be accomplished of value by means of the eugenic movement. I was asked to discuss negative eugenics, but the positive side also is one of interest and value. First of all I wish to answer Mr. Folks' remarks with regard to

segregation. I quite believe that society ought to do all that it possibly can to prevent the breeding of persons who have serious defects, and that this must be accomplished by either of the two methods suggested, but it seems probable that segregation will be less offensive to public opinion and can be more readily enforced than sterilization. On the other hand there are left at large a great number of defectives that cannot be shut up and cared for by the state. To take all of the people who are sub-normal and put them into institutions would put an intolerable tax upon all those outside. It has often been stated that we spend more effort and money in bringing up abnormals than we do in taking care of our normal children, and some one has wished that all the normal children could have the admirable care and attention that is devoted to sub-normal ones. Now the burden of taking care of the abnormal members of society is a growing one and if we are going to include all the sub-normals we shall have a larger task than we can possibly undertake. Therefore we cannot bring about the segregation of all defective persons. We can segregate only the worst and that can and ought to be done. It is a blot on any state that calls itself civilized to allow these people to be at large and breed idiots and imbecile children.

Coming to the positive side of eugenics which the Chairman suggested that I speak on for a few moments, I think a great deal can be accomplished, probably a great deal more on the positive side than on the negative. As I said in my report, the rate of breeding among seriously defective people is not very high, contrary to many statements that have been made upon the subject, and there is not a very great danger of society being swamped out by these defective strains; on the other hand the great danger that is facing this country is that the good stocks will disappear, that the good lines of heredity will run out owing to causes, in most instances voluntary, which should be avoided and which are not in the nature of inevitable laws. There should be a campaign of education; such a campaign has already been started and much good has been accomplished. It must be evident to every normal person that he lives not to himself: we all are units in the great organism of mankind and perhaps the greatest, the most sacred, the most important duty which any man or woman can render to the race is to leave the world good, wholesome, happy children who will come on to take the places of their parents in the future years. The saddest thing that I know is to see splendid families run out as you see them run out in all the older centers of population. In Boston and elsewhere many excellent old families which has given to us Presidents and other great men are dying out, and foreigners are coming in and taking the places of these fine old families. The general population is growing and people do not see, do not realize the actual condition. What is true in Boston is true of Philadelphia—there is a maxim, "as rare as a dead mule or a Quaker baby." Certainly the fine old stock is running out in many places and to a certain extent this can be prevented by a campaign of education.

Every means ought to be taken to bring about the marriage of the best with the best, realizing that the future of the race depends upon good heredity. Marriage selection must take the place of natural selection in modern life. Evolution has brought man from a very low level to his present position without human interference; it did not depend upon eugenics or artificial selection to bring the ape-like creatures to the level of civilized man but rather upon natural selection, or the survival of the fittest. We could trust to the same principles that brought about human evolution in the past to look after the future if only we did not interfere with it; but we have virtually eliminated natural selection from human life and if we do not substitute in its place intelligent artificial selection the race is doomed.

The Chairman: I wish to say on behalf of the Committee, and also as an explanation of my question to Prof. Conklin, that the Committee felt that the first in the series of papers to be presented this afternoon should place negative eugenics before you; that the next one should deal with the question "what are we to do with those babies that are born?" There is a saying that at the moment of conception the gate of gifts is closed. Now most of us think of birth as being the beginning of each individual life and most of our attention is directed to the care of the child after birth but perhaps the most wonderful part of his life is from the moment of conception when "the gate of gifts is closed" to birth when we as society, recognize a new individual among us. The Committee therefore decided to bring into the discussion what we know it to be scientifically possible to do for the individual during the prenatal period. Mrs. West, of the Federal Children's Bureau, is the next speaker.

THE PRENATAL PROBLEM AND THE INFLUENCES WHICH MAY FAVORABLY AFFECT THIS PERIOD OF THE CHILD'S GROWTH

MRS. MAX WEST, The Children's Bureau, Washington, D. C.

Those of you who were present at the meeting of this association in Boston last year will remember that the attention of that meeting was directed on several occasions, notably by Dr. Williams in his presidential address, to the subject of prenatal care, as being one of the most important and largely neglected or unrecognized factors in the prevention of the early infant mortality, whose causes reach back into conditions affecting the mother before childbirth.

This year we are approaching the matter from a slightly different, though closely related viewpoint, namely, to inquire what prenatal care will do to prevent or decrease the weakness, illness and deficiency of the infants who manage barely to survive the conditions which kill so many others. One-third of the infants who die in the first year of life, die in the first month, from congenital debility, prematurity or accident at birth and the like, or from some disease in the mother; but no one has even been able to count the babies who never live at all, and those, who though they may live through the first month, are more or less permanently injured and disabled by these same causes. These puny, ill-conditioned babies crowd our welfare stations and hospitals; many of them die in later infancy; many succumb in childhood to some form of acute illness, against whose inroads they have but slight power of resistance; others live to recruit our institutions for sick, crippled, deficient and defective children; still others live on dragging out enfeebled existences, possibly becoming finally the progenitors of weaklings like themselves.

I take it then that the question that the eugenicist is particularly concerned with today is to inquire what prenatal care will do to remove this handicap, so far as it is removable. To what extent and in what particulars can we hope to forestall infant weakness, illness, and deficiency of development, and to increase the proportion of healthy, well-born children, who shall grow to full and normal maturity fit

to be the progenitors of a vigorous and virile line, by surrounding the prospective mother with every known condition for her physical and mental well-being during the months of pregnancy.

Let us then hastily run over the already proved results of prenatal care as demonstrated in the various experiments now being carried on, and see what hopeful augury for the future may be gleaned from this experience. I need spend little time in recounting to this audience the great importance prenatal care is everywhere assuming. Only yesterday this was reiterated in your hearing in the discussion regarding midwives. But as far as I am aware, the eugenicists have not laid great stress upon it and it is gratifying and most complimentary to have been invited to present the matter in this meeting.

The first proposition I wish to submit is that maternal illness and suffering may be greatly reduced and much of it prevented altogether by the intelligent application of prenatal care. This seems to me to be a point of great significance to the eugenicist.

The child within the mother's body is dependent entirely upon the mother for the materials for growth, and it is only through the substances conveyed in the maternal circulation that the mother can affect the child for good or ill during pregnancy. It is, therefore, a simple proposition requiring no demonstration, that a healthy woman, who has enough suitable food to eat, who is not overworked, overtired or overstrained, who is relieved of worry, who has time for exercise out of doors, who takes plenty of sleep and who is kept free from illness, or whose illnesses are promptly relieved, in short, one whose various bodily processes are carried on in the highest degree of health will be more likely to send into her own blood stream the right sort of nutritive material for the building of a sound and normal infant. On the other hand, it is equally plain that a mother who is continually surrounded by unfavorable conditions will hardly be able to furnish the proper food elements either in quantity or quality, and that as a natural and inevitable consequence the baby will be unable to draw from the maternal blood stream the necessary food for complete and perfect development. The result is a weakened and impoverished infant, not to mention a weakened and debilitated mother.

These are conditions of practical importance. The child who has been half starved during the nine momentous months before birth,

or deprived of a healthy intra-uterine development because of the illness or overwork of the mother is hardly less likely to become a social derelict than the one who has an inheritance of morbidity, and, therefore, it takes only ordinary intelligence to recognize the wisdom of giving prenatal care at least a full and fair test. If the widespread application of complete and standardized methods of antenatal hygiene to women awaiting child birth will have the result that we have good reason to believe it will have of raising the standard of maternal health and removing from our infant population some part of the burden of physical inefficiency which it now carries, then every eugenicist will hail its establishment with joy, for he will see in it some shortening of his long task.

Conceding, if you please then, that it is of prime importance to establish, conserve, and if necessary rebuild the mother's health, to use every known means to make her most efficient for the function of child bearing; what then will be the resulting effect upon the child? The first and most striking result will be the production of a greater proportion of live-born, full term babies. It is hardly necessary to pause here to adduce the figures in proof of the fact of the great reduction in the number of miscarriages, premature births and stillbirths resulting from the supervision of pregnancy. The facts are well understood and figures are given in detail in the proceedings of this Association for last year and the preceding year. Babies carried to term, it is needless to say, will be stronger and better fitted for life than otherwise.

The second important result of prenatal care is that the babies of supervised pregnancies are somewhat above the average in weight. In the work of the Boston Prenatal Committee, the average weight of the babies of supervised mothers was 7 lbs. 11 ozs. and this average included the weights of premature babies. This gain of from 4 to 8 ounces in weight over the ordinary average is a distinct advantage to the baby, as within reasonable limits, the larger he is at birth, the better the start he has.

The third point is that prenatal care increases the number of breast fed babies. The result comes about from the fact that the mother is better fed during a supervised pregnancy, her health is conserved by suitable care, her breasts and nipples are properly treated.

and also from the fact that intelligent prenatal care inevitably leads to improved obstetrical and post-natal nursing care, so that the maternal function is not allowed to lapse. Testimony on this point is given by many organizations. In Boston about 85 per cent of all babies of supervised mothers were breast fed at the end of one month; and 93.5 per cent of those supervised by the New York Milk Committee. I do not need to take the time of this audience to recite the advantages of breast feeding. It may be taken for granted that every one here will concede that the natural method of feeding is perhaps the biggest single post-natal factor necessary to the rearing of a race of better babies.

Unusually striking testimony to the general value of the supervision of pregnancy and the provision of proper care before and during childbirth is furnished by an article by Dr. Pinard in the Bulletin of the Academy of Medicine in Paris, for February, 1915. Dr. Pinard says:

"A central office for the assistance of mothers and infants was organized on the principle that during a war and as long as an army is kept mobilized every woman without adequate means who is pregnant, or who has a child under three years of age, should be assured the social, medical and legal protection to which she has a right in civilized society. Never have pregnant women been so well cared for; 74 per cent of the 16,579 childbirths during the first five months of the war were in institutions, some improvised to serve as maternities during the war. Never have all the parturients and young children had so much done for their welfare as in Paris at this time. Comparing the figures with those of the previous year, the result is shown in a much lower morbidity and mortality and there were only 45 foundlings to 662 in the same period in the previous year, and all this notwithstanding the anxiety of the mothers with the dear ones in the trenches. All the women delivered in the institutions were able to nurse their babies at first. The maternal mortality was about 20 per cent less than that of the same period in 1913, and the infant mortality was 30 per cent less. The number of infants abandoned by their parents was less by about half. It may also be said that the infants of 1914 were superior to those of previous years. Their weight, which averages 15 per cent higher than that of the infants of

the previous years, proves this incontestibly. Results such as these, obtained during a period of distress and trouble, show what can be done in the future during peace and ordinary industry for the future of the race."

Leaving the solid basis of proved results for a moment for the less secure ground of speculation, it is interesting to find more than one writer hinting at the possibilities of prenatal care in the prevention of mental defect. Dr. H. B. Sheffield says:

"There is ample reason for the belief that the anteconceptional deficiencies in the germ-plasm which are productive of amentia in the child may be the result not only of neuropathy in the parents but also of other pathologic states, more especially tuberculosis, cancer, syphilis and the like, the toxins of which acting as poisoning and deteriorating agents upon the germ cells, the embryo and foetus and arresting their normal development. * * * The postconceptional causes of mental deficiency acting upon the embryo and foetus are as prolific as and possibly more so than those exerting their influence through heredity. Notwithstanding the purity and normal activity of the parental germ-plasm, it may yet fail in its destiny, if the soil in which the seed is to grow is lacking in the essential prerequisites for healthy growth and development. * * *

"No definite statistics have thus far been adduced to show the degree or extent of the beneficial influence of antenatal hygiene upon the mentality of the offspring, but some approximate estimate can be obtained by analogy, when we compare the weight and physical power of resistance of babies born under favorable conditions with those born of mothers who up to the last moment of pregnancy were exposed to hardship and struggle for existence."

Dr. Walter Fernald, has called attention in a recent paper to the need for intensive pathological research into the non-hereditary or environmental group of cases of feeble-mindedness concerning which there is little or no exact knowledge.

Closely connected with this matter is the subject of the mental defects of infants due to brain injuries at birth. One writer states that these are very common and frequently pass unrecognized. The general improvement of obstetrical procedure, which is everywhere recognized to be one of the most important objects of prenatal care and education would tend to prevent a certain number of these cases.

Summarizing then, prenatal care, it appears, will result in the saving of many lives, both of mothers and of babies; it will result in greatly improved maternal health, leading to a great increase in the capability of breast feeding; as a corollary to these facts, prenatal care will tend to the production of a race of vigorous, normal babies, who shall start out with the full development of organs and functions. Furthermore, since improved prenatal care inevitably involves and includes the provision of the right sort of obstetrical and nursing care at birth, and during the lying-in period, it will work towards the reduction of injuries, neglect and mistaken practices, which will finally reduce the number of blind babies and those who suffer unnecessary harm to the brain and spinal cord at this period.

Granting then that prenatal care is sufficiently productive of permanent good to make it worth while to follow it up and to extend it for the sake of both its known and its unknown possibilities, it remains to inquire what are some of the more important problems to be met in this work.

The nursing side of prenatal care is already quite widely in operation and presents no special problems save those of ways and means. The number of organizations employing one or more prenatal nurses is constantly increasing and the instruction they give is more nearly standardized, probably, than any other part of this work. Recent reports made to the Children's Bureau show that agencies in at least 182 cities are carrying on this work. What is chiefly needed is money for more nurses; more and better equipment and facilities for bringing well-understood and productive hygienic advice to all the women who need it. Especially from the rural district comes the cry for the visiting nurse. Nowhere is she more sorely needed and nowhere more useful. This demand looks like a large one, but the extension of present working methods is a slight task compared with the institution of new and untried methods which were undertaken and carried through by the earliest prenatal workers.

On the medical side of prenatal care many and serious problems arise. The cooperation of obstetricians with the nursing service, through clinics and otherwise is proceeding quite satisfactorily. But the great question of how to place really scientific medical and

obstetrical care at the disposal of all pregnant women in the country is yet almost entirely unsolved. In addition, there remains the vast unexplored field of questions regarding the physiology and pathology of pregnancy which can be answered only by medical research, as Dr. Williams and others have pointed out, notably Dr. DeLee in his paper at yesterday's session. The London Lancet has lately published an important article by Dr. Amand Routh, urging upon the medical profession the great necessity of more careful attention to the health of the expectant mother, and a study of morbid conditions affecting her and through her the unborn child. Dr. Williams brought out the same necessity in his paper on the limitations and possibilities of prenatal care last year, especially as regards syphilis. There are the medical problems presented by alcoholism, lead and other forms of poisoning, the effect of the employment of the prospective mother upon embryonic and foetal development, and many others. There is, for example, the great problem of the improvement of obstetrical practice and teaching, involving the medical colleges, medical students and the midwife. There is an infinitude of work on this phase of prenatal work yet to be done, but the problems involved are not hopeless, and certainly it is not fair to say that the potentialities of prenatal care have been measured while there is yet so much to be done.

On the social side there are still many and equally pressing questions.

These are the practical difficulties that every prenatal worker constantly faces and which baffle and discourage. Of what use is it to insist that pregnant women shall have plenty of nourishing and appetizing food, soup, fresh meat, eggs, vegetables, milk, fruit and the like, when the whole family lives upon potatoes and baker's bread for its entire ration? Where is the good food to come from? Nor is it any more reasonable to insist that a poor pregnant woman shall have plenty of rest in the last two months of pregnancy when she has all the work of the family on her shoulders, or when her giving up some gainful outside occupation for the rest so vitally necessary reduces the family income below a living level.

It is futile to insist upon her presenting herself at the clinic at stated intervals or to beg her to leave home for two or three weeks at confinement if there is a family of small children to be left alone at

home and an overworked and underfed husband—helpless before the added burden, if there is no practical relief in sight. This opens the whole question of maternity insurance.

The conditions which press heavily upon so many women in crowded tenement districts in large cities have their prototype in country districts as well. Dr. Dorothy Reed Mendenhall, lecturer in the extension division of the University of Wisconsin, says:

"In districts where the servant class is unknown and the income of the average farmer is only five or six hundred dollars a year, it is absurd for us to preach rest and the dangers of overwork to women on whom depend the washing, scrubbing, cooking, sewing, and caring for a family often of large size. The average book or pamphlet on hygiene for the prospective mother does not furnish much help for the mother of six when it tells her that she must not do any heavy manual work and that she should enter a hospital if she cannot secure the services of a competent physician. In many instances she has to do heavy work or see her family suffer, and she unfortunately cannot leave her children to the care of the hired man, as the farmer does his stock, if a hospital were near enough to be of service to her."

It is such questions as these, that confront every prenatal worker. They ramify into every part of our social and industrial life. In the last analysis they are the problems that follow in the train of poverty and ignorance and can be answered only by the spread of education, and the satisfactory adjustment of social and economic conditions. But, however discouraging this problem appears, I beg to submit that prenatal work is possibly more hopeful and encouraging than any other form of social work. The immediate work of prenatal care is not expensive nor difficult. Very much can be accomplished without great expenditure, and the necessary hygienic instruction is within the compass of ordinarily intelligent persons. The amount of good that can be done is sometimes in gratifying disproportion to the time and effort spent. The worker knows that not only may the coming baby's life be saved and given a full normal development, with all the possibilities that go with that fact, but that the mother will be spared needless illness and suffering and because of this the family will be better taken care of and the sum total of human happiness will be definitely increased.

No one fancies for a moment that the limit of benefit in prenatal work has been reached. Ten years ago the words "prenatal care" were unknown. Five years ago they were just beginning to be mentioned; and it is only within the past two years that this Association has begun really to reckon with this subject as a vital issue. Certainly no one is fatuous enough to suppose that the final possibilities in a movement thus in its earliest beginnings, can by any means yet be estimated or weighed. Even the well understood measures are only partially in effect. There are still hundreds of thousands of women who are bearing children, without having had the least scientific attention during pregnancy, and even those who come under the intelligent, beneficent care of prenatal nurses and obstetrical physicians are so few that it would not be hard to count them. Therefore, let me say that there is here a vast opportunity for the eugenicists if they should care to join the ranks of those whose chief interest is the reduction of infant mortality in pushing the work of proper and adequate supervision of pregnancy to the fullest extent.

If with the slight, more or less incomplete and largely unstandardized prenatal work already being done, it is possible to secure such results as those mentioned, is it not practical good sense to test the method fully, and thus by elimination separate whatever defects are thus capable of being prevented from those that are inherent in the germ-plasm. If any considerable number of these defects are shown to be amenable to ante-natal treatment, then surely it is only common sense to apply this treatment in the widest fashion before resorting to far more difficult and yet uncertain measures.

The most encouraging feature of this work is that it may be brought to the test at once, and we do not have to wait the slow process of centuries to get the results. Today we may begin to care for expectant mothers, and may test the result of that care in the next generation. As Dr. J. W. Ballantyne, the well known Edinburgh obstetrician, in strongly urging the overwhelming necessity of much greater attention to the pregnant state, says with regard to eugenics and prenatal work:

"Should the results of surrounding the pregnant woman with the conditions of health be disappointing, a very unlikely occurrence; should her offspring prove no better developed and no healthier than

the children of her less happily situated sister, an almost unthinkable result; should, in a word, antenatal well being turn out to be unattainable by means of the hygienic management of pregnancy, then, after all, little time * * * will have been lost. * * * Until the full effect of surrounding the expectant mother and through her the unborn infant, with a healthy environment has been tried; until the possible results of sending to the child's tissues through the maternal blood the right materials in their proper proportions have been thoroughly ascertained; until it is known what influence the exclusion of all toxins and toxic agents from the life that is before birth may have; until these things have been done and these measures attempted, it is foolish to propose revolutionary legislation * * *."

There is still much to be done. May I submit in closing that the extension of prenatal care is rapidly assuming greater and greater importance in all forms of infant welfare work, that its possibilities have only begun to be appreciated and that its vast extension will result in incalculable benefit to the human race.

REFERENCES ON PRENATAL CARE

- Transactions of the American Association for Study and Prevention of Infant Mortality for 1913 and 1914. under the subject of Prenatal work.
- Reports of the New York Milk Committee, 1911 and 1912.
- Report on Infant Mortality in Johnstown, Pa., Children's Bureau, U. S. Dept. of Labor, 1914.
- Reports of the Medical Officer of the Board of Education, London, 1912, 1913, 1914.
- Reports of Dr. Arthur Newsholme, Medical Officer of the Local Government Board, London, 1913-14, containing a report on Maternal Mortality in connection with Child-Bearing.
- Also same report Supplement containing a Report on Infant Mortality in Lancashire.
- Maternity: Letters from Working-Women, Collected by the Women's Cooperative Guild, London, 1915. G. Bell and Sons.
- Infant Mortality, George Newman, M. D., London, 1906, Methuen and Co., Especially Chapter 9, Preventive Methods.
- Expectant Motherhood, J. W. Ballantyne, M. D., London, 1914. Cassell and Co.
- The Endowment of Motherhood, John F. Moran, M. D. Journal of the American Medical Association, January 9, 1915.
- The Endowment of Childhood, John F. Moran, M. D. Journal of the American Medical Association, December 25, 1915.

PREPARATION FOR MOTHERHOOD

FLORENCE H. RICHARDS, M. D., Medical Director, Wm. Penn High School,
Philadelphia

Most people will admit in these days the necessity of imparting to young people some information about the origin of life, the changes of adolescence, the nature of marriage, the social evil, etc. The great stumbling-block is, who shall do the teaching. Nine out of ten people, if asked this question, would answer, the parents; while the Hon. E. Lyttelton, Head Master of Eton College, adds as additional sources of information, the family physician, the minister or priest, and the school teacher. Now, as a matter of fact, very few parents give this information to their children. In my own experience in a girls' high school of over two thousand pupils, less than two per cent have received any specific instruction as a preparation for motherhood; and while we are arguing the question as to who shall give the instruction, the girls are all getting the information in some other way from the books, magazines and newspapers they read, from the theatres and moving picture shows, from the bill posters, from servants and school-mates, and from watching the action of animals either in the barn yard or on the city streets. The information is often vulgar, sometimes vile, and generally unscientific or absolutely false.

If we are to give instruction in this line it will be very difficult to get at the parents. How many would come even once a week for graded instruction in these lines? But we can reach the school children, who are the parents of the next generation. I believe the instruction should begin with quite young children, in their nature work, and be graded right on up through the elementary school and the high schools. In the lower schools, the work should be presented by the regular teachers of the children, and in the higher schools by the man and the woman physician.

In outlining a course in Eugenics which is adapted to the needs and intelligence of the high school girl, I prefer to use the word eugenics in its broader meaning. Sir Francis Galton, the founder of eugenics, gives this definition: "It is the science which treats of

all those agencies which either improve or impair the health of future generations." Therefore leading up to the real subject of eugenics should come a course in domestic sanitation. This should include a brief study of the home and family and their great value to the State. Following logically would come a study of house furnishings, lighting, heating, plumbing; disposal of garbage and sewage; a brief study of germs, infectious diseases and their early recognition; the intelligent use of disinfectants in the home; a study of two of the race poisons, tuberculosis and alcohol. It is better to present the subject of alcoholism from the sociologic viewpoint. The pupils have already had instruction in the physical effects of alcohol and are generally sick of the subject, but they are intensely interested when shown the connection between alcohol and poverty, vice and crime; the loss of character and the breaking up of families; loss of positions and of wages; effect on the children, both physical and mental, some facts about the Juvenile Court and the Court of Domestic Relations, the stand against alcohol taken by each and all of the countries now concerned in the European War; also the economic stand taken by the larger corporations, such as the railroads, trolley lines, steel works, etc. It makes a great impression and one which they will not forget. This preliminary course should end with a number of lessons on home nursing. Girls should be taught the preparation and proper furnishing of the sick room, how to behave when visiting the sick, the administration of medicines; liquid, soft and light diet; and practical lessons on how to fill a hot water bag or ice-cap, how to take a temperature or make a mustard plaster, and how to put on a first-aid surgical dressing.

The work of the first term leads up to the second term in which should be taught eugenics proper. A general review of the different periods of life, infancy, childhood, adolescence and adult life, makes a good lesson to begin with, and then the stage of adolescence may be specially considered. A study of the physical and mental changes during puberty should precede a study of reproduction and the reproductive organs. Reproduction should always be approached from the biologic side and graded from the lower animals up to and including mammals. Lessons in marriage should include especially the choice of a husband physically fit for marriage, something about marriage and divorce laws, the false marriage and the run-away marriage.

The instruction on the care of the baby should be preceded by one lesson on the care of the expectant mother. The beauty and sacredness of motherhood should be emphasized and we should try to eradicate the idea so prevalent in so-called polite society that it is a shameful condition and that the expectant mother should be shunned by her friends and acquaintances until after the baby has arrived. In my own experience, the care of the pregnant mother is always listened to with rapt attention, and I am sure will make for better babies in the future.

The care of the baby should include a knowledge of what clothes are necessary for the new born baby and the cost of each article; how to hold a baby, dressed and undressed; how to give a bath; the feeding, both natural and artificial, with emphasis laid on the former; the advantage of "modified milk" over all proprietary foods; what to do in emergencies, such as colic, spasms, etc., and the recognition of the common ailments of babies. There should be a model on which to demonstrate, and the girls should be urged to practice on any babies to which they may have access.

The negative, or dark side of eugenics should consist of a short study, not over-emphasized, of the one remaining racial poison, venereal disease, with special stress laid on the effects on the wife, mother and child, and a consideration of that allied subject prostitution. Every girl should know enough to protect herself in her choice of a husband and to require of him the same purity he expects of her. The average age of the prostitute is seventeen years, and about one-fifth of all prostitutes are in the business voluntarily. The others are forced into it by ignorance, by vanity, poverty, low wages, etc. As high school girls average seventeen years it is wise and just to warn them of the pitfalls into which girls may so easily slip, especially girls who have to go out into the business world. A last lesson on those things which tend toward immortality would make a good ending for the course. Girls should be warned against indecent dressing, including low-necked gowns, tight clothes which emphasize the figure, transparent fabrics, and the use of paint and powder on the face. Each one of these, taken separately, might perhaps not be so reprehensible, but taken together they put a girl in the same class as the demi-monde.

There should be instruction in regard to proper and improper dancing, the good and bad play, the dangers of the theatre and moving picture show, the wholesome and the unwholesome novel, the good and bad in art; how to behave, especially with boys and men, in the home, on the street. in the office or department store, at the place of amusement, etc.

Such a course as I have sketched out should be given to girls in high schools by a woman physician, as the knowledge then comes with more weight than it does from the lay teacher. It would send girls out from the schools with a broader, deeper view of life. They would more fully realize the sacredness and responsibility of marriage, and their duty toward the next generation. In other words, they would be scientifically trained for motherhood.

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The Chairman: If I have interpreted the wishes of the audience correctly you would rather hear the speakers without interruption and then discuss the subjects collectively. The Committee's next subject is "The method of developing or modifying in each child during his growth the heritage received from his parents." Prof. Thorndike, of Columbia University, was to have presented a paper on this subject, followed by Dr. Richards' application of the scientific facts to instruction and development of the teaching methods. Prof. Thorndike has found it impossible to be with us, but we were fortunate enough to secure Mr. Paul Popenoe, editor of the Journal of Heredity, who will discuss this subject without the paper itself being read. I will now call upon Mr. Popenoe.

METHODS OF DEVELOPING OR MODIFYING IN EACH CHILD DURING HIS GROWTH TO MATURITY THE HERITAGE RECEIVED FROM HIS PARENTS

PAUL POPENOE, Washington, D. C.

When we discuss methods of developing or modifying in each child during his growth to maturity the heritage received from his parents, we assume, what I believe to be a fact, that the heredity of each child gives him tendencies to develop, mentally as well as physically, along a large number of different lines. The discussion then involves two distinct though interrelated problems:

- (1) Development as far as possible or desirable *along* the lines thus predetermined;
- (2) Development *away from* these lines; that is, the modification of the heritage.

The first problem is that of education in general; it is far too big a subject to be dealt with here, even if I were competent to do so; therefore I shall limit myself to a discussion of the second part of the question. Given a child with a certain heritage, how far can we change that heritage? To what extent are the nurture and training that a child receives effective in altering his inborn nature?

Francis Galton, founder of the science of eugenics, hit on an ingenious means of testing this question. You know that there are two kinds of twins; in one case two children happen to be born at the same time, and they are no more alike than ordinary brothers and sisters born a few years apart. But so-called identical or duplicate twins are halves of the same egg, which splits in two at an early stage of its development, each half then developing an entire individual. These identical twins, being in reality halves of the same individual, are of course very much alike, sometimes almost incredibly similar, as most of you have at some time had the opportunity of observing for yourselves.

Now Galton reasoned that if environment really changes the in-born character, then these identical twins, who start life as halves of the same whole, ought to become more unlike if they were brought up

apart; and as they grew older and moved into different spheres of activity, they ought to become measurably dissimilar. In the case of ordinary twins, who start dissimilar, they ought to become more alike when brought up in the same family, on the same diet, among the same friends, with the same education. If the course of years shows that identical twins remain as like as ever and ordinary twins as unlike as ever, regardless of changes in conditions, then environment will have failed to demonstrate that it has any great power to modify one's inborn nature.

With this view, Galton collected the history of eighty pairs of identical twins, thirty-five of which cases were accompanied by very full details, which showed satisfactorily that the twins were really as nearly identical, in childhood, as one could expect to find. I can not quote his long and interesting descriptions ¹ of them; I can only state the conclusion. In the case of these thirty-five pairs who were "closely alike" in both body and mind, during childhood and youth, when they were brought up in the same environment, what changes did their separation into different environments, different walks of life, when they grew up, produce?

In many cases the resemblance of body and mind continued unaltered up to old age, notwithstanding very different conditions of life; in others a severe disease was sufficient to account for some change noticed. Other dissimilarity that developed, Galton had reason to believe, was due to the development of inborn characters that appeared late in life. He therefore felt justified in broadly concluding "that the only circumstance, within the range of those by which persons of similar conditions of life are affected, that is capable of producing a marked effect on the character of adults, is illness or some accident which causes physical infirmity. The twins who closely resembled each other in childhood and early youth, and were reared under not very dissimilar conditions, either grow unlike through the development of natural (that is, inherited) characteristics which had lain dormant at first, or else they continue their lives, keeping time like two watches, hardly to be thrown out of accord except by some physical jar."

¹ Galton, Francis, "Histories of Twins", in his "Inquiries into Human Faculty", edition of 1907, pp. 155-173.

Next let us consider the ordinary twins, who were unlike from the start. In many cases they were brought up under exactly similar conditions. The environment for each was the same. If environment really has any power to change the inborn character of a child, these twins ought to become more alike all the time. Let me cite the parents' own statement of the facts, as Galton quotes them in some of the actual cases:

(1) One parent says: "*They have had exactly the same nurture from their birth up to the present time; they are both perfectly healthy and strong, yet they are otherwise as dissimilar as two boys could be, physically, mentally, and in their emotional nature.*"

(2) "I can answer most decidedly that the twins have been perfectly dissimilar in character, habits and likeness from the moment of their birth to the present time, though they were nursed by the same woman, went to school together, and were never separated until the age of 15."

(3) "They were never alike either in body or mind, and their dissimilarity increases daily. The external influences have been identical; they have never been separated."

(4) "The two sisters are very different in ability and disposition. The one is retiring, but firm and determined; she has no taste for music or drawing. The other is of an active, excitable temperament, and is passionately fond of music and drawing. From infancy they have been rarely separated even at school, and as children visiting their friends, they always went together."

(5) "This case is, I should think, somewhat remarkable for dissimilarity in physique as well as strong contrast in character. They have been unlike in body and mind throughout their lives. Both were reared in a country house, and both were at the same schools until the age of 16."

And so on. "The impression that all this evidence leaves on the mind," as Galton says, "is one of some wonder whether nurture can do anything at all, beyond giving instruction and professional training." If education could mould the individual during the so-called plastic years of childhood, here was a perfect opportunity to prove it. But we find its effects insignificant. It is heredity that counts.

Professor Edward L. Thorndike of Columbia University more lately made an investigation of the same kind with 50 pairs of twins in

the New York public schools. Not content with taking parents' descriptions of their resemblances and differences as Galton did, Thorndike carefully measured with the most refined methods their resemblance in eight physical characters and six mental characters.

The results ² agreed with those of Galton, in showing that similar home environment and training seemed to have practically no influence in changing the inborn, inherited character of the children.

"The facts," Thorndike wrote, "are easily, simply and completely explained by one simple hypothesis: namely, that the natures of the germ-cells—the conditions of conception—cause whatever similarities and differences exist in the original natures of men, that these conditions influence mind and body equally, and that in life the differences in modification of mind and body produced by such differences as obtain between the environments of present-day New York City public school children are slight." He reached the same conclusion that other studies of this sort have shown, that in the make-up of the individual there are probably nine parts of heredity for every one of nurture or training.

"The inferences," he says, "with respect to the enormous importance of original nature in determining the behavior and achievements of any man in comparison with his fellows of the same period of civilization and conditions of life are obvious. All theories of human life must accept as a first principle the fact that human beings at birth differ enormously in mental capacities and that these differences are largely due to similar differences in their ancestry. All attempts to change human nature must accept as their most important condition the limits set by original nature to each individual."

Twins certainly offer a crucial case, and until some one can explain away this evidence, eugenics might well rest on its oars, putting the burden of proof on those who think that any child will turn out well if given a chance. But we have not stopped here; we have in the last decade or two amassed a great body of proof, largely mathematical in nature, which demonstrates beyond the possibility of refutation, it seems to me, that training can do little more than develop the inborn character—that it cannot change this character. These investigations

² Thorndike, E. L., "Measurements of Twins". *Archives of Philosophy, Psychology and Scientific Methods*, No. 1, New York, 1905.

are an important, in some ways a revolutionary, contribution to sociology, but I have time to cite only one of them, as a sample of all.

We are constantly told that the intelligence of school children is largely dependent on their physical condition and their home environment. We hear marvelous stories of how dullards have become prodigies when their teeth were repaired and their adenoids removed; of the great gain in efficiency in schools when the children are given hot lunches, and the like. The eugenist had no particular reason to doubt these stories; certainly he wished every child to have the best surroundings and physical condition possible; yet we suspected that the success of a child in his studies would depend a good deal more on his heredity than on his lunch, and we therefore thought the facts should be ascertained. Fortunately, modern eugenics has an instrument of great precision for this sort of work, in the coefficient of correlation, a mathematical process which I can not stop to explain, but which gives results that are exact, not guesswork or expressions of personal opinion. With this method Dr. David Heron of London measured the relation between the intelligence of all the pupils in 14 schools of London, and their weight and height, condition of teeth and clothing, state of nutrition, cleanliness, good hearing, and the condition of the cervical glands, tonsils and adenoids.

Many of you will expect, I fancy, that the most intelligent pupils were the cleanest, healthiest, best fed. Many teachers would take oath to that effect. But the impersonal, unimpeachable verdict of a mathematical measurement is that mental capacity is not closely associated with any of the characters dealt with.³ The relation between a child's intelligence and his parent's intelligence, is close; that between the child's intelligence and his health, cleanliness, freedom from adenoids, etc., is insignificant. It is heredity that makes the child what he is, and the surroundings and training have vastly less power to alter this heredity, than we are accustomed to suppose.

When we assume, therefore, as sometimes we tacitly do in America, that if every child has equally good home surroundings and an equally good education, he will have an equally good chance to succeed in the world, we are stating that which is demonstrably false. Equal train-

³ Heron, David, "The Influence of Unfavorable Home Environment and Defective Physique on the Intelligence of School Children". Eugenics Laboratory Publications, Memoir Series, No. VIII. Dulau & Co., London.

ing will not only fail to make a lot of children equal in achievement—it will actually increase the difference between them. Professor Thorndike and a number of other psychologists have made careful tests of school children in this respect, finding out their relative ability in some task, then submitting them all to a long course of training in this task, each one getting the same amount of training; and finally testing their relative ability at the end of this training.⁴

The results have been the same in every case. All the children made *some* improvement under training; but if the improvement made by those who were poorest at the beginning be represented by 100, the improvement made by those who were best at the beginning would be represented by 200 or 300.

The differences we see in men are due principally to differences in their heredity, not differences in their education or training. If they had all had exactly the same chance, the differences between them would be even greater than they are now.

I could go on for an hour piling up mathematical proof of this overwhelming importance of heredity—proof (provided the material is properly chosen) that no one can dispute unless he is prepared to dispute that two and two are four. The impossibility of modifying the child's heritage to any marked degree is such an important fact, and so little realized, that I should like to emphasize it as strongly as possible.

But I should be sorry if my emphasis resulted in showing this fact in a distorted light. For heredity is only one side of the case. If the best environment in the world can not make good heredity out of bad heredity, it is equally true that good heredity and bad heredity alike deserve the best possible environment, in order that they may give the best they have to give. Furthermore, while the general dispositions of a man's nature are dependent on his heredity, it is certainly true that the exact use he makes of these dispositions is due largely to his environment. If a boy has inherited that complex of dispositions which makes for ability in business, the question of whether the business to which he applies them is groceries or dry goods, real estate or railroads, is determined by his surroundings. *"How many and how hard* things a man can learn or do are largely

⁴ Thorndike, E. L., "Educational Psychology", edition of 1914, Vol. III, pp. 304, 307.

decided by original nature," as Professor Thorndike expresses it; "but within these limits, what he learns or does is largely a matter of what he is stimulated to do and rewarded for doing." From this point of view, the child's surroundings and education are of vital importance to the child and to the race, even though they can not actually modify to any marked degree his original, inherited nature.

One might balance up the points on each side at great length. Without attempting to do this any further, I may fittingly close by quoting Professor Thorndike's summary⁵ of the problem:

"On the whole it seems certain that prevalent opinions much exaggerate the influence of differences in circumstances and training in producing the intellectual and moral differences found in men of the same nation and epoch. Certain natures seem to have been made by certain environments when really the nature already made selected that environment. Certain environments seem to eliminate certain traits from an individual when really they merely expel the individual *in toto*.

"Thinkers about the organized educational work of church, library and school need especially to remember three facts.

"First—For the more primitive and fundamental traits in human nature such as energy, capability, persistence, leadership, sympathy and nobility the whole world affords the stimulus, a stimulus that is present well-nigh everywhere. If a man's original nature will not respond to the need of these qualities and the rewards always ready for them, it is vain to expect much from the paltry exercises of the schoolroom.

"Second—The channels in which human energy shall proceed, the specific intellectual and moral activities that shall profit by human capacities, are less determined by inborn traits. The schools should invest in profitable enterprises the capital nature provides. We can not create intellect, but we can prevent such a lamentable waste of it as was caused by scholasticism. We can not double the fund of human sympathy, but we can keep it clear of sentimental charity.

"Third—Morality is more susceptible than intellect to environmental influence. Moral traits are more often matters of the direction of capacities and the creation of desires and aversions. Over them

⁵ Thorndike, "Educational Psychology", Vol. III, pp. 313-314.

then education has greater sway, though school education, because of the peculiar narrowness of the life of the school room, has so far done little for any save the semi-intellectual virtues.

"The one thing that educational theorists of today seem to place as the foremost duty of the schools—the development of powers and capacities—is the one thing that the schools or any other educational forces can do least. The one thing that they can do best is to establish those particular connections with ideas which we call knowledge and those particular connections with acts which we call habits."

DISCUSSION

The Chairman: This series of interesting papers has probably impressed you with a desire to go home and think them over rather than discuss them here. However, we still have a few moments left for discussion.

Dr. Davenport White, Washington, D. C.: I want to speak on the physical rather than eugenic conditions as regards prenatal work. We have been trying to find some definite means by which we can do our best by the mother and the future child. Washington, as you know, is primarily a social city, and so is quite different from any other city of like size in the United States. We began our work on certain specified plans, which, from time to time had to change; in one particular locality, for example, we have to deal with the colored race. We find that the colored women in the South, as a general rule, are low in morality, and for that reason venereal diseases largely account for our stillbirths being higher than in other localities. The Wassermann test for syphilis has been helpful in some cases. Practical directions written out for the mother, explained and followed up on the mother's return the second time to the clinic, have proved worth while. Alcoholism, the possibility of physical and nervous strain, the possibility of accidents, or anything of that order, the general care of health in her home as regards cleanliness are factors of importance. The majority have a low grade or moderate secondary anemia, which requires treatment. At the bottom of our record sheets the doctor's name is written, so that in any emergency that particular doctor may be called on. We also have arrangements with the foremost maternity hospitals for the admission of those who do not wish to be cared for in their own homes. We insist, the second time they come to the clinic, on a complete physical examination, with pelvic measurements taken both inside as well as out; also on a specimen of urine being brought to the clinic each time they report. At their first visit to the clinic the blood pressure is taken, and when necessary at later visits. Further instruction is given from time to time both by the attending physician at the clinic and the district nurse at the home. We have found conferences

for these patients useful, and the patients are invited to bring their sewing in order that they may incidentally receive many practical suggestions regarding their own and their babies' clothing. We believe that following the birth of the child the mother should be given the hospital care she may require at the end of three months, or when her nursing period is over.

The Chairman: Is there anyone else present who desires to discuss any one of these papers?

Dr. Emily Ray Gregory, Philadelphia: No one who is spending any time in Philadelphia can fail to have heard of Dr. Richards' work at the William Penn High School. We have other women who are doing similar work in our High Schools in other parts of the country. I have had certain work in other cities with smaller groups, and have known of the necessity for it, of the gratitude of the girls, of the gratitude of their mothers, but there are two points which I should like to bring out. There are very few physicians with the exceptional qualifications required for this work, because there are comparatively few medical schools as yet which require biology. Therefore very few physicians have had the training in general biology which enables them to carry out such a program. The vast majority of them have not been trained as teachers, and a great many of them to put it in the mildest form, have a pathological bias, owing to their necessarily constant connection with disease, so that I have observed very unfortunate results following lectures by physicians even to mothers, and especially to young women—due to the emphasis upon the pathological instead of on the normal. Therefore if we are going to have this training given we must look to other people in addition to the physicians. Another point, most physicians are too busy to do this work of instruction. Now I think that the well-trained biologist can usually meet the need. We are dealing with questions of health in particular, not of pathology. The well-trained biologist can have all the training necessary for giving such instruction about racial poisons and the early stages of disease, such as the mother needs to know, especially when it is so important that we should emphasize the normal and not the pathological. If a child is not well, it is sick, and that is the time to call in a doctor. Now if we train only these young women, we will have to wait for the next generation to deal with the training of the children. Three years ago I said "Why don't we try to train those mothers?" Everybody said, "It's no use; we can't train the mothers." During the past year I have had the pleasure of trying to train mothers somewhat and I assure you it is not a hopeless matter. The mothers are as grateful as the children, particularly when you lay stress on what Dr. Richards has already spoken of, the importance of the bright attitude toward life. It is beautiful to watch the development of a flower, a plant. We encourage our children to study the life of the insect; we delight in the study of the history of birds, but we find unfortunately that the attitude toward the development of human life has been

absolutely abnormal and coarse, and that which should be the highest and most wonderful of all has been looked upon as something suspicious and to be ashamed of. That is absolutely wrong of course, and the mothers are capable of being trained out of it as well as the daughters. I remember my first talk to a group of only about twenty mothers a year and a half ago, of intelligent but very busy women, who looked a little afraid; they wondered what I was going to say. I had called it race hygiene that day. In about twenty minutes their expression had absolutely changed; they realized that they were not going to hear anything shocking; they realized that human life was a part of the great scheme of creation, that it was just as wonderful, just as dignified and just as right as any other type of life. If we give this training to parents, we shall have a beginning on the children that are coming right along now without waiting for the children of the next generation, and I want to say that the foreigners within our gates, the working women of America as well as the most highly educated, highly intelligent and wealthy, need this training, are capable of taking it and are grateful for it.

CARE OF HOMELESS BABIES

Thursday, November 11, 1913, 2.30—4.30 p. m.

CHAIRMAN

MR. ALBERT CROSS, Philadelphia

STATEMENT BY THE CHAIRMAN:

We have under discussion this afternoon a subject which is probably as important, if not more important, than anything that has as yet been taken up in this convention. The discussion of the care of the homeless baby naturally is divided into two sections—the care of the baby in the institution and that of the baby in the private home. It is the hope, I believe, of Philadelphia today that this session will have something to say definitely concerning the much mooted question as to the desirability of placing babies in institutions or in private homes. I personally hope that this meeting will bring out something in a constructive way that will go farther than merely stating the fact, or, what seems to be the fact—that many more babies die in institutions than in private homes. That fact seems to be more or less generally accepted, but we are not going to get very far toward a solution of the problem unless we can do two things—first, show why babies die in institutions in a much larger number than in private homes, and, second, consider what can be done to meet the situation. It is perfectly reasonable to state that if nothing can be done to meet such a situation, then the institution should give way to the private home. Our program includes papers by Dr. Baker, Mr. Bedinger and Dr. Hess.

THE POSSIBLE REDUCTION OF MORTALITY AMONG SUB-NORMAL INSTITUTIONAL BABIES

S. JOSEPHINE BAKER, M. D., Director, Bureau of Child Hygiene,
Department of Health, New York City

Institutionalism, so-called, bears a prominent place as an etiological factor in infant morbidity and mortality. The records of foundling hospitals and of hospitals devoted exclusively to the care of sick babies or having a special service for this purpose, give mortality statistics which seem abnormally high when compared with the infant mortality rate of the community as a whole.

An impartial study of this subject must take into consideration the fact that hospitals, per se, admit only infants who are ill at the time of admission, and foundling hospitals receive infants who are atrophic, subnormal, premature, marasmic or even moribund and infants suffering from definite disease, in addition to the infants who are presumably well. In such a classification the mortality rate is, and probably always will be, appreciably higher than that occurring among all infants born in any city or town.

Mortality statistics in foundling institutions are based generally upon all births occurring in the institution and all admissions. In studying these statistics as they relate to infant mortality, two factors must be considered: First, the age grouping and, second, the condition of the infant on admission.

In a recent article entitled "Are Institutions for Infants Necessary?" Dr. Henry Dwight Chapin* states: "In order to get a general idea of the usual death rate in institutions that house many infants, I made a study of the statistics of ten of these asylums, located in different cities, as follows: New York City, Buffalo, Providence, Philadelphia, Baltimore, Washington, Detroit, St. Louis and New Orleans. The time covered varied from four to twenty years, taking the longest and shortest intervals. The rates were based on the ratio between yearly admissions and deaths, and were as follows: 51.17 per cent, 40.6 per cent, 40.0 per cent, 60.0 per cent, 31.7 per cent, 75.0 per cent, 65.8 per cent, 47.7 per cent, 36.1 per cent, 49.5 per cent. In all but

* Transactions Fifth Annual Meeting American Association for Study and Prevention of Infant Mortality, 1914.

one of these institutions the deaths included all infants under two years. As the greatest mortality is under one year, the showing would be worse if restricted to this age. The following figures taken from one of these institutions exemplified this point. During 1907, 320 were admitted; of these, 147 died under one year and only 18 between one and two years. During 1908, 417 were admitted and of these 113 died under one year and only 12 died between one and two years."

As this study concerns itself with babies from the New York Foundling Hospital, the statistics of that institution may be taken as a basis of comparison in regard to age grouping and condition of the child on admission. Late reports of this institution do not furnish data on this subject and the report for the years 1908-1909 will be used.

During 1908 there were 2,347 admissions at all ages, and 1,202 deaths, a total mortality of 51.+ per cent. During 1909 there were 2,490 admissions and 1,393 deaths, a total mortality of 55.+ per cent. In 1908 of the 2,347 children admitted, 238 or 10.+ per cent were in good condition, 979 or 41.+ per cent in fair condition and 1,130 or 48.+ per cent in poor condition.

The ages on admission were 2,190 under one year; 129 from one to two years; 21 from two to five years, and 7 over five years. Of the children under one year 1,079 or 49.+ per cent died, and of the children over one year, there were 123 deaths or 78.+ per cent. Of the deaths under one year 676 or 50 per cent occurred under two months of age, while 825—over 75 per cent—occurred under six months.

The striking facts to be gleaned from these figures are the relatively poor condition of the majority of children when received, the high mortality rate during the first months of life, falling during the later months of the first year and rising again to an alarming extent during the period over one year.

For many years it has been recognized that the purpose which promoted the institution of foundling asylums must be readjusted, at least in part. Primarily they were organized for the purpose of reducing the excessive infant mortality due to illegitimacy and abandonment of infants. The provision of an asylum where these unwelcome waifs might be received and cared for met a need that was urgent and compelling. That such a need still exists, it is futile to deny. In a consideration of the relative value of such institutions in our present

knowledge of infant care, the fact must not be lost sight of that the extent of illegitimacy and abandonment at the present time is a factor that merits deep and earnest thought. If evolution in our treatment of this problem is to continue it must do so with a recognition of the debt that society owes the self-sacrificing men and women who have in the past and who are now giving their lives in following the precept of their Master that "inasmuch as you do it unto the least of these you do it unto Me."

For many years the New York Foundling Hospital has, in cooperation with the Department of Health, carried out an extensive system of placing out babies to board in private homes under the care of competent foster mothers. All women wishing to receive children to board must first apply for and have issued by the Board of Health a permit to board a definite number of children. These permits are issued only after an investigation has been made of the applicant's home surroundings, and her health and general aptitude. This preliminary investigation is made by a physician of the Department of Health, and thereafter the foster-mothers and babies are kept under constant supervision by a special staff of trained nurses of the department. Detailed instructions as to feeding and the general hygiene of baby care are given and their proper observance by the foster mother insisted upon. In every instance possible the foster mother and baby are placed under the direct supervision of the staff of one of the infants' milk stations. Failure to obey the regulations of the department results in revocation of the permit and the placing of the baby under other care.

Wide latitude is essential in dealing with this subject. The welfare of the baby is the main object to be attained and the value of the foster mother must be predicated rather upon her ability to keep the baby well than upon her material surroundings. The main essential of an efficient boarding-out system is competent and continuous supervision.

For this service the institution pays the foster mother ten dollars per month for each child boarded out, in addition to furnishing the necessary clothing, medicine and the supervision maintained by them. The city furnishes the continued supervision of the infant in the home.

During 1913 the hospital under consideration admitted 2,326 children, 1,025—44 per cent—were boarded out, and 1,301—56 per cent—

were kept in the institution. Experience has shown the value of this procedure. The decrease in the institution death rate for the past five years is in itself convincing testimony.

PERCENTAGE OF DEATHS UNDER ONE YEAR OF AGE, BASED UPON BIRTHS AND NEW ADMISSIONS UNDER ONE YEAR OF AGE, IN THE NEW YORK FOUNDLING HOSPITAL AND ON BIRTHS REPORTED IN NEW YORK CITY AT LARGE

Year	Death rate per hundred births and new admissions under one year of age in institution	Death rate per hundred births reported in New York City
1910	52.0	12.5
1911	49.0	11.2
1912	41.5	10.5
1913	42.2	10.1
1914	35.7	9.4

It must be conceded, in the absence of definite data, that a proportion of this reduction may reasonably have occurred as a result of improved methods of infant care and hygiene in the institution, but evidence is strongly corroborative that the placing-out system is entitled to the credit for the major part of the reduction.

The Hospital has claimed, and justly, that the lowered mortality among boarded-out infants is due in part to the unwillingness of the foster-mothers to care for babies who were physically abnormal. In other words, the foster mothers take only the well infants, leaving the sub-normal or actually ill groups in the institution.

It was the belief that competent foster mothers could be found who, for an increased rate of compensation and the furnishing of readily accessible medical and nursing supervision, would be willing to assume the care of even the most delicate babies.

Acting upon this supposition, on June 1, 1914 a cooperative experimental study was instituted by the New York Foundling Hospital, the Department of Child Helping of the Russell Sage Foundation and the Bureau of Child Hygiene of the New York City Department of Health.

It was agreed by the New York Foundling Hospital that, if competent foster mothers could be obtained, babies of the atrophic, premature and marasmic type, in whom the mortality had previously been practically one hundred per cent, could be boarded-out. It was understood that only those babies should be included in this group where the prognosis for life was hopeless from the institution standpoint.

The Child Helping Department of the Russell Sage Foundation offered to pay a bonus of five dollars per month, in addition to the ten dollars paid by the institution, to each foster mother caring for one of these infants, and the Bureau of Child Hygiene offered supervision and full responsibility for obtaining proper foster mothers and furnishing adequate medical care and nursing supervision.

Recognizing the high mortality rate in the class of babies to be cared for and the fact that at the time of placing out the expected duration of life for the majority was a matter of a few days or even hours, detailed plans were made for immediate and emergency medical supervision. A special staff of physicians and nurses was formed by the Bureau of Child Hygiene for this duty. As soon as a suitable foster mother was obtained, a nurse went to the hospital and personally took the baby to the home, remaining with it until the mother was instructed in all details of its care. Both physicians and nurses were on duty continuously to respond to any call made by the foster mother.

It was the endeavor of the Bureau of Child Hygiene to make its service equal to the best private medical care. The majority of the babies were taken from incubators in the hospital but in no instance were incubators used in the homes, though the substitutes of thick coverings of cotton and hot water bags were resorted to. Owing to the great lack of vitality in these infants, it was found to be a practical impossibility to obtain satisfactory photographs of them when placed out. They were too delicate to be taken out and attempts at home photography proved a failure.

Feeding and care varied widely, to suit individual cases. No baby was strong enough to nurse from the breast. Breast and modified cow's milk were used in all cases, a medicine dropper being the mode of administration in a majority of instances. General medical and nursing care was adapted to individual cases.

The doctors and nurses were indefatigable and enthusiastic in their attention. Calls were made at all hours of the day and night and in more than one instance a doctor was awakened at a late hour at night, to find the foster mother unwilling longer to care for such a sick baby and turning over the charge to the doctor, who kept the baby all night and next morning took it to another foster mother.

The human element in this study could be dwelt upon almost indefinitely. The infinite, tireless care of the foster mothers and the

equally tireless endeavors of the doctors and nurses should be mentioned as the most important factors in whatever success we may have achieved. It was not, however, the intention to overelaborate the care, making the expense of this method prohibitive, therefore, with greater familiarity with the subject, and increasing confidence, it was determined on September 21, 1914, to alter our methods and place these babies under the care of the nearest milk station doctor and nurse, abolishing the special staff.

Since that time one nurse has been assigned for general supervision of these babies throughout the city, personally placing all babies and continuing a general oversight. Whenever possible, the babies are taken regularly to the milk stations by the foster mothers. Emergency attention is still provided by the milk station doctor and nurse, with home visits. This method is in force at the present time.

The statistical results of our cooperative work are divided into two periods, mainly for the purpose of cost comparison. During the entire period from June 1, 1914 to September 21, 1915, eighty-six babies were placed out. Eleven of these were returned to the New York Foundling Hospital at its request and for various reasons, such as "given out by mistake," "information obtained that child had syphilis" and similar reasons. The remaining seventy-five babies are to be considered in our study.

Of these seventy-five babies, thirty-nine have died and thirty-six are now living, a mortality of 52 per cent.

Fatal Cases

39 cases averaged 46 days each in the home of the foster mother
 39 cases averaged 5½ lbs. in weight when originally placed
 39 cases averaged 40 days in age when originally placed

Terminated as Well Babies

9 cases have been terminated as being perfectly well at present. (These were originally diagnosed as marasmus cases)

Average days in the home of the foster mothers.....	296
Average age when placed.....	40 days
Average weight when placed.....	5lb 7 oz.
Average age when terminated.....	1 yr. 2¼ mo.
Average weight when terminated.....	18 lb 15 oz.
Average gain in weight.....	13 lb 8 oz.

Babies Still Boarding in the Homes of Foster Mothers

Babies at present in the homes of foster mothers.....	25
Average stay of each case.....	340 days
Average age when placed.....	22 days
Average weight when placed.....	5 lb., 3 oz.
Average weight September 21, 1915.....	15 lb., 6 oz.
Average gain in weight.....	10 lb., 3 oz.

Babies Returned to Their Mothers

Two babies were returned to their mothers and, at the last account, were alive and well.

A detailed analysis of the unit cost is given in the following table:

From June 1, 1914 to September 21, 1914

1,723 baby days at \$.16% a day.....	\$ 287.07
(Cost to Russell Sage Foundation)	
1,723 baby days at \$.33% a day	574.14
(Cost to New York Foundling Hospital)	
194 days service of medical inspectors at \$.33%.....	645.67
194 days service of nurse at \$2.50.....	485.00
Carfare (2½ mo. 6 employees at \$3.00 equals \$18.00 per mo.).....	45.00
Telephone (2½ mo. 3 employees at \$1.50 equals \$4.50 per mo.).....	11.25
Postal cards, 500.....	5.00
Stamps	1.50
	<hr/>
	\$2,054.63
Total cost	\$2,054.63
Total number of baby days.....	1,723
Unit cost per baby day.....	\$1.19

From September 21, 1914 to September 21, 1915

12,188 baby days at \$.16% a day.....	\$2,031.32
(Cost to Russell Sage Foundation)	
12,188 baby days at \$.33% a day.....	4,062.63
(Cost to New York Foundling Hospital)	
Salary of nurse, September 21, 1914 to September 21, 1915.....	900.00
Carfare, twelve months at average of \$4.00 per month.....	48.00
Postal cards, 200.....	2.00
12,188 baby days at \$.04 for medical and nursing supervision.....	487.52
	<hr/>
	\$7,531.47
Total cost	\$7,531.47
Total number of baby days.....	12,188
Unit cost per baby day.....	\$.62

The present cost of caring for each baby is sixty-two cents per day. Through the courtesy of Dr. E. W. Banta, I have obtained the unit cost per day of infant care at several hospitals and foundling asylums. This cost ranges from a minimum of one dollar per day to a maximum of two dollars and twenty-nine cents per day. At the New York Foundling Hospital it was not possible to ascertain the actual unit cost per day of infant care. The city, however, contributes to this hospital fifty-five cents per day for each baby committed. This does not include overhead expenses and charges for administration.

It is obvious, therefore, that not only may we reduce the death rate of one hundred per cent among this special class of babies at least one-half by placing them out to board under the care of competent foster mothers, but we may do so at a cost less than that essential for institutional care.

So definite has been the impression made by this study that the hospital is, I am informed, preparing to continue it as part of its regular program. Such a procedure will inevitably have an appreciable effect in lowering the total mortality in the entire group of infants committed to the care of the institution.

For continued success, however, two factors are essential—first, continued competent medical and nursing supervision and, second, and possibly the most important, the recognition of the human element, not only in the selection of foster mothers but also in the type of physicians and nurses. These babies are very delicate and very ill; devoted and individual care, mother love and the deepest human interest must be given in abundance. The efforts of medical science may pertain equally in the institution or in the home but the vital need of every baby to be considered as one human being and not one of a group must take precedence of all other considerations if the right to live is to be assured.

It is hardly possible to speak of more than a few of those who have given freely of their interest and enthusiasm in saving these babies, but particular mention is due Sister Theresa Vincent and Sister Matthew of the New York Foundling Hospital, Dr. Hart and Dr. Lighton of the Russell Sage Foundation, and Dr. Ansbacher, Chief of the Division of Midwives and Foundlings of the Bureau of Child Hygiene and the following doctors and nurses of the Bureau of Child Hygiene of the Department of Health: Drs. Banta, Tienken and Van Wart, Leader, Seckel, Mildenberg, Wolff, Marshall and Hill, the Misses Cure, von Heygendorff, Crutchfield and Clark.

THE WET NURSE DIRECTORY OF BOSTON

GEORGE R. BEDINGER, Boston

A report regarding wet nurses in Boston was to have been given by Dr. Fritz B. Talbot. Most of the information I now present has been gotten from him, and I wish also to express my appreciation to Miss M. McKinnon, social worker of the Directory, and Miss Margaret Farquhar, of the Infants' Hospital, Boston.

Convinced of the importance of the wet nurse problem and desiring to bring the demand and supply together, Dr. Talbot in February, 1910, established the Directory and Home for Wet Nurses. It was not an original idea, but the fact that wet nurses may be obtained at any time has undoubtedly saved the lives of many Boston babies during the last five years. The Directory was first opened under the supervision of the Massachusetts Babies Hospital, and when that institution ceased to exist, the Directory was transferred to the Infants' Hospital. The original home contained accommodations for eight wet nurses and a matron. Wet nurses were found and still come to the Home in various ways: 1. The majority come through the various maternity hospitals in Boston. For destitute mothers with new born babies wet nursing offers one of the very few occupations peculiarly fitted to their cases. 2. Postal cards sent to 8,000 physicians in New England, explaining how wet nurses might be obtained from the Directory, resulted in creating a demand as well as increasing the supply. One physician in Hartford supplied the Directory with from eight to ten wet nurses a week during last summer. 3. Social agencies, such as the Society for Helping Destitute Mothers and Infants and the Children's Aid Society, send wet nurses to the Directory.

Before admission rigid physical examinations are made of both the wet nurse and her baby, especially for tuberculosis, gonorrhea and syphilis. The Wassermann test is made on every case through the cooperation of the Peter Bent Brigham Hospital. Only those who are found to be in every way physically suited will be sent as wet nurses. Furthermore the wet nurses are only

allowed to go to a home in which the family physician guarantees that there is no danger to the health of the wet nurse or her baby.

The original fee of ten dollars has been abolished. The wages paid wet nurses have been increased to \$15 a week. Of this \$8 goes to the nurse, and \$7 to the Directory. Twenty-one dollars is charged, if the girl lives at the Directory and has her milk drawn. In special cases the Directors of the charity gladly send a nurse to a home for less than the sum of \$15 per week, the balance being made good by subscription. Until 1913 the budget of the Directory was about \$1,300, which paid for the board and lodging of the wet nurses, the salary of the matron and other incidental expenses, but did not include the salary of the social worker. Now the Home has been enlarged so that it has accommodations for 14 nurses. It averages from 7 to 10 and the average number of wet nurses on cases is 15 per month. These nurses have been sent as far as St. Louis, New York and Providence. The present budget is \$5,500 and the Directory is three-fourths self-supporting. It could be made entirely so, the social worker thinks, if bad bills could be collected.

The balance is paid by the Board of Directors, a group of ladies, who meet once a month for a business meeting and twice a month for case committees. This board furnishes the wet nurses with uniforms and takes an active interest in the welfare of the girls.

About 85 per cent of the wet nurses are unmarried mothers, the majority being primiparae, their ages varying from eighteen to thirty years. From the start these young women are put on a self-respecting basis while with the Directory. At the home much time is spent in teaching them some of the principles of hygiene and of the care of their own babies. Light housework, washing and mending are taught, as it is often found that these can be done by them in the families where they go.

In no case is the wet nurse allowed to take a case without her own baby. Too much emphasis cannot be laid on the success of the Directory in developing the mother's character by keeping her baby with her. Self-respect comes quickly, because she is earning her living honestly. Her gratitude to the Directory is shown by the large number of girls who at the end of a case, return to the Directory, either for another position or for advice for the future. Sometimes she is

able to wet nurse in several families, and most of the women have saved from \$50 to \$300 with which to start in life.

Obviously trained social workers, such as Miss McKinnon and Miss Farquhar, play a unique part in the work of the Directory. They learn the woman's true story, become her friend, confidante and adviser. It is often possible to secure some settlement from the child's father. After the period of wet nursing is finished, a position is found with the baby if possible, and if not, a suitable home for the baby, where the mother can see it daily.

By establishing a directory as outlined above, the wet nurse problem has been solved in Boston. In addition to those available in the Home, two are daily on hand at the Infants' Hospital, and breast milk is sent free upon request from the Infants' Hospital to babies in other Boston hospitals.

The chief need seems in making the Directory for Wet Nurses better known. Postals to physicians and the use of the daily papers should soon do this. It is to be hoped that other cities interested in this problem will not encounter the obstacle in this direction that we meet in Boston. Our best afternoon paper, the one dear to the hearts of the Back Bay, considers the whole subject of wet nurses immodest and refuses to print the word.

INSTITUTIONS AS FOSTER MOTHERS FOR INFANTS

ALFRED F. HESS, M. D., New York

There is no doubt that the mortality in institutions housing infants has been not only great, but appalling. Pediatricists have been cognizant of this unhappy condition for many years, but it is only lately that it has become general knowledge not only among the medical profession but among the laity as well. When we are informed by Van Ingen that in two large institutions, over 50 per cent of all the babies admitted died before they were two years of age, ⁽¹⁾ and we read in a recent report published by this Association that in another asylum over one-fifth died before completing their first month of residence, and over a third before completing their second month, ⁽²⁾ we realize that this is a most serious situation, and one demanding immediate investigation and correction. Nor can we condone this state of affairs in the belief that these statistics refer to the new-born and to very young infants, for upon looking further into this report, we find that of infants committed when they were three to four months of age, forty per cent died, and of those between the ages of six and eight months, about one-third died. It is therefore not surprising that an increasing lack of confidence has developed in the usefulness of all institutions whose function it is to care for infants and young children.

The fundamental point in an inquiry into this question should be whether there is anything essentially wrong in the system, or whether the high death rate in these institutions is dependent rather on the method of their administration. If the system is at fault, then, as Chapin says ⁽³⁾, "the infant asylum must go." If, however, the system is capable of being satisfactorily administered, then what is needed is not the demolition but the reorganization of the asylum. It should be noted that in approaching this subject from this point of view, we are assuming the burden of proof and taking it for granted that a high death rate does not and cannot occur when infants are cared for according to the alternative method—the boarding out in homes.

There are as yet no statistics on the "boarding-out" system, so that it is impossible to judge whether this premise is true, whether it is indeed a system possessing inherent virtues. The reason why statistics are lacking is because in almost every organization a combined boarding-out and asylum system is in vogue. Often the healthy babies are boarded out and admitted to the institution only when they are ill or in need of special care. It is thus patent that unless very great care were exercised in compiling the data, the results in the homes would appear most excellent, and the mortality in the institutions excessively high.* Indeed it is due to this very factor of error that some of the percentages which I have quoted have reached such large proportions, for they relate to institutions which make use of the combined system.

The opinions which I hold on this subject are based upon an experience extending over a period of almost five years with the care of the inmates of the Hebrew Infant Asylum of New York, a service which I share with Dr. Sidney Haas. This institution harbors about 400 children under the age of five years, who have been committed by the city to its care, generally on account of the death or the destitution of their parents.

There are no "born-in" babies and no mothers. All children are accepted who are not suffering from an acute or communicable illness, whether they are thriving or poorly nourished. If not claimed by relatives, they are retained until they have reached the age limit, when they are transferred to the orphan asylums. The number of infants must necessarily vary at different times. However, the average census under the age of one year is about fifty, with about an equal number between the ages of one and two years. I have gathered together the vital statistics of these infants so as to obtain an insight into the measure of our success and failure during this five-year period, and at the same time gain a practical viewpoint of this entire question. On attempting to arrange figures of this kind, one is at once confronted with unexpected difficulties. In an effort to acquire a satisfactory method of computing the mortality, I appealed to the Children's Bureau at Washington and to the Statistician of the State Department of Health, only to learn that I was presenting a "problem

* In computing the mortality rate in institutions, this principle should be followed, and all deaths included of cases transferred to other hospitals, for infectious diseases, etc. This rule has been followed in our computations.

of great complexity" and one which they felt themselves unable to solve. It is therefore to be hoped that the Committee on Statistics of this Association will continue their efforts so that a generally accepted statistical form will be available for all child caring institutions.

It has been stated by many that for some peculiar reason, infants cannot thrive in an institution; that, although they enter as healthy, well nourished babies, within the course of some months they grow pale and weakly, and, in the majority of instances, die. The cause of this peculiar loss of vitality is variously explained, and quite commonly is summed up under the general term "hospitalism." With this point of view in mind, I have prepared a table (Table 1) in order to ascertain what has been our experience in this respect. This table, which may be termed a "vitality table," shows what has happened to all the infants admitted to our institution during the past five years, grouping them in two divisions—those committed under six months of age, and those committed between the ages of six months and one year. Some of these children returned to their homes or to other institutions; some died in our institution, and the rest are in the asylum at the present time. It is hardly necessary to discuss this table in detail: It is presented to emphasize one fact, namely that infants can be successfully reared in an institution. The fact that 106 children in the Asylum, that is to say, one-fourth of our population, were admitted as infants under six months of age, and that 162, or two-fifths of our present census, were admitted under the age of one year, shows that infants can reach childhood in an asylum. These infants do not develop into the wan, marasmic babies so commonly associated in our minds with such institutions, as may be judged from the data of infants reported in Table 2. These are not selected cases, but a complete list of infants under one year of age admitted to the institution from May to the end of September of this year. It will be noted that the roster includes many underweight babies, which, it should be added, were suffering from marasmus and rickets. In every instance they immediately gained in weight. One subsequently died of pneumonia. They were cared for in the cubicle ward, to which all babies under nine months of age are assigned on admission.

TABLE 1. Subsequent History of Infants Under One Year Admitted to Asylum from 1911 to 1915.

A. Admitted under 6 Months of Age

Length of Stay in Institution

	Less than 3 mos.	3-6 mos.	6-12 mos.	1-2 yrs.	2-5 yrs.	Total
Returned to Homes	25	12	12	24	4	77
Died	30	12	10	2	..	54
Remaining in Asylum	9	14	21	34	28	106
Total						237

B. Admitted 6-12 Months of Age

Returned to Homes	27	17	14	9	3	70
Died	8	4	3	1	..	16
Remaining in Asylum	4	3	18	12	17	54
Total						140

TABLE 2. Gain in Weight of Infants after Some Months in Asylum.

	Date of Admission (1915)	Age (mos.) on Admission	Wght. (lbs.) on Admission	Wght. in Asylum Oct. 4, 1915	Remarks
1	May 4	4	13	20	Rickets and Bronchitis Not given breast milk
2	May 15	2	8	15½	
3	July 13	9	17	21	
4	July 23	¾	6	9½	
5	July 15	9	17	21	
6	August 2	1½	6¼	9½	Not given breast milk Rickets, Bronchitis Pertussis
7	August 2	3	9	12¾	
8	August 2	¾	8	11¾	
9	August 17	3	8	10¾	
10	August 18	6	8	11	
11	August 18	2	8	11	Rickets, given some breast milk Rickets, Bronchitis Marasmus, given some breast milk Marasmus Rickets
12	August 21	3	7	8½	
13	August 28	4	9½	10¾	Rickets, given some breast milk Marasmus, given some breast milk Marasmus Rickets
14	Sept. 1	4½	6	7	
15	Sept. 23	6	10	10½	Rickets
16	Sept. 28	6	10	Died.	

Table 3 gives in summarized form the mortality among our infants under two years of age, from 1911 to 1915. It will be seen that the mortality rate in relation to infants committed, has been somewhat

over 16 per cent among those under one year, and 8 per cent among those between one and two years of age. Although this mortality is higher than has been our experience in the past two years, it is markedly low when compared with the figures cited in the beginning of this article. It should be added, however, that this method of computing the mortality rate harbors a considerable possibility of error, for it is evident that if children are committed to an institution in large numbers and remain there but a short while (so that the total number of commitments is large), the mortality will be far less than in an institution where few children are committed, but are kept for a long period. In our institution the commitments are few. Accordingly, for the year 1914 we added a second method (as shown in Table 3), of computing mortality. We have made a total of the number of days' institutional care that children of certain ages have received. For example, in this year infants under 6 months received 7,424 days' care, and those from 6 to 12 months of age over thirteen thousand days. As there were fifteen deaths under the age of six months in the course of the year, we had one death for every 494 days' care of infants of this age. The further details of this computation may be seen in the accompanying table. (Table 3.)

TABLE 3. Mortality of Infants Under Two Years (1911-1915.)

A. 1911-1915

	Committed	Died	Death Rate
Under 1 year.....	380	62	16.3%
1-2 years	203	17	8 %

B. Mortality According to Ages.

	Under 1 mo.	1-2 mos.	2-3 mos.	3-6 mos.	6-9 mos.	9-12 mos.	1½ yrs.	1½-2 yrs.	Total
No. of Admissions ...	69	54	40	76	80	61	122	81	583
No. of Deaths...	6	2	4	22	13	15	11	6	79

C. Mortality 1914 (Computed according to total No. of days' care)

	Total No. Infants	Total No. Days' Care	Total No. Deaths	Death Ratio
Under 6 months.....	87	7,424	15	1 : 494 days
6-12 months	64	13,234	7	1 : 1,890 days

A perusal of these tables should make it clear that infants can be reared for years in an institution, that they can thrive amid these surroundings, and that although infant mortality remains an ever acute problem, it does not need to reach the excessive proportions which it has at times attained. The next step we cannot make, namely a comparison with some other method. However, as will be noted below, there is reason for believing that babies which are boarded out, may not infrequently fare worse.

A few words as to the plan and organization of the Asylum may be of interest. There are three wards for infants: Two of these are large rooms accommodating twenty to twenty-five infants, and the other is a cubicle system containing twelve glass partitioned rooms for an equal number of babies. The cubic space is about 450 feet per baby in all three wards, and yet the results in the cubicles far exceed those attained in the wards, demonstrating that the number of cubic feet is only one of many factors which enter into the welfare of the infant.

The nursing staff is composed of nursery maids who come to us untrained to receive a nine months' course of instruction, and of permanent and more experienced nurses who are in charge of the wards. The nursing may be characterized as only fair, for its quality could be decidedly improved. There is one nurse to about five infants by day, and one to ten or twelve infants at night. The asylum is housed in a modern building which has free access of air and all wards are equipped with balconies for the babies or young children. There is, naturally, a milk laboratory in the institution for preparing the food for the babies, which allows the most advanced methods of infant feeding to be put into practice. Recently, Dr. Leopold of our staff, has obtained considerable success with the use of Schloss milk and, at present, Dr. Riesenfeld is making a practical test of the milk devised and recommended by Friedenthal. We have at all times one wet nurse in the institution, who frequently supplies milk as part feeding to two or three babies.

As you are well aware, summer diarrhea has become decidedly less frequent during the past few years in New York and many of the other larger cities. This has likewise been our experience in the Asylum, so that we no longer dread the summer months and the heat. In fact, remarkable as it may seem, our mortality is lowest during the summer season. I have prepared a table (Table 4), which brings

out this interesting fact in sharp relief. Here we see the deaths occurring during the years 1913, 1914 and 1915, arranged according to the months in which they occurred. This table includes all the deaths among our children, both those taking place in the institution, as well as those which occurred in the hospitals for contagious diseases, or other hospitals to which children were transferred. All but one of these children were under two years of age. The significant fact is that *during a period embracing three years, we had a total of but five deaths during the four hottest months of the year*, and that the mortality was considerably higher invariably during the winter months. In other words, we have to dread not summer complaint, but *winter complaint*. This winter mortality is the result of pneumonia. These pneumonias have their beginnings in the simple every day coryzas or colds, which, unless they are quickly noted and appreciated, and unless decided measures are enforced to prevent contagion, may reach epidemic proportions. This is the disease of infants which, for a better title, has been termed "grippe", and which is characterized by its many complications, including besides pneumonia, otitis, nephritis, and serious gastro-intestinal disturbances.

TABLE 4. Distribution of Mortality According to Months. "Winter Complaint" not "Summer Complaint"

	No. of Deaths 1913	No. of Deaths 1914	No. of Deaths 1915
January	5	2	1
February	1	6	1
March	2	4	5*
April	5	5	1*
May	2	0	2*
June	1	0	0
July	1	1	0
August	1	0	0
September	-	1	0
October	3	4	1
November	4	1	.....
December	1	2	.....

* Includes one case of tuberculosis

This infectious disease constitutes at present the most important medical problem for those who are caring for young infants in institutions. It should and must be eradicated, as has been summer complaint. We have been making every effort to this end, but, as our records show, have achieved only partial success. As the measures

which we enforce may be of value to those who no doubt are contending with this same difficulty, we shall review briefly some of our regulations in this connection. Any nurse who has a cold or rhinitis is temporarily debarred from service in the infants' wards. When physicians have colds, they make it a practice when visiting these wards to examine the infants as little as possible. In fact, it is a general rule that the babies should be handled only when necessary. They are not to be petted. In this respect we differ absolutely from those who believe that the "mothering" of infants is necessary, and that the reason why babies do not thrive in institutions is because they miss this mothering. On the contrary, this handling or mothering spreads the grippe infection just as it disseminates measles or other communicable diseases, which are probably conveyed to a large extent by direct contact. Another factor of importance in preventing the spread of this respiratory infection is that there should not only be sufficient cubic space in the wards and that the cribs should not be crowded closely together, but that there should be likewise sufficient cubic space in the dressing rooms where the infants are diapered and bathed. In planning infant asylums, the dressing rooms should be made proportionate to the size of the ward and the tables should be arranged so as to avoid close contact. Furthermore, experience has taught us that infants and runabout children cannot be safely housed in the same wards even for a short period. Until a few years ago we had infants and children of this age in the same ward in our admitting pavilion, and the result was that during this period of three weeks, the infants almost invariably developed colds and suffered the consequences. Since we have segregated the infants, however, not only in the main institution, but also in the admitting pavilion, our results have improved decidedly. It would seem that one of the reasons why some are of the opinion that infants cannot be reared in institutions is because they draw the analogy from their sad experience in hospitals, where they have found that healthy infants lying among the sick, in the course of time invariably contract some disease from their neighbors.

As we have said, the alternative method of caring for infants is to board them out. As you know, the Department of Health of New York City licenses a large number of women, after investigating their characters and their homes, to care for one or more babies. It is very

evident that a method of this kind can never be uniform, that of necessity there will be good foster mothers and poor foster mothers, and that, unless it is carried on under the closest surveillance, great abuses may creep in. Although my experience with this method is limited, I am able to state from experience that some of these mothers are by no means the type of women who should be entrusted with the care of infants. Is it realized by those who are so confidently urging the adoption of the boarding out system, to the exclusion of all others, that they are at one stroke casting to the winds the hard earned knowledge of modern or scientific pediatrics, the very corner stone upon which the specialty has been erected? They are declaring that in practice the much lauded milk laboratory, where the babies' food is prepared according to the prescribed formula and in the most aseptic manner, is after all not of great moment to the well being of the baby. Now, although it may be true that the influence of the milk laboratory has been somewhat exaggerated and although the expression "scientific infant feeding" has been loosely used—for infant feeding is not a science but merely an art—we believe that the proper and intelligent preparation of milk in the asylum is of great advantage as compared with the unintelligent and careless methods carried out in the tenements.

The fact of the matter probably is that just as you may have good and poor institutional care, so there is good as well as poor care of infants who are boarded out, and there is nothing sacred in either system. In this point of view I differ absolutely from Chapin, who as regards institutions, believes that "the high mortality is not so much due to lapses in care or details in management as to the system itself, which is wrong." Some of our experiences hardly lead to this conclusion. The accompanying table (Table 5), shows a number of infants who were admitted to the Asylum last spring after having been boarded out for many months in licensed homes in New York City. It will be seen that they were a poorly nourished group, markedly under weight, with the exception of one (Number 8), who had been boarded out with a wet nurse. All but one of these babies had been boarded out for a half year or more, nevertheless their health could not be compared to that of institutional children as we are wont to see them. They gained at once in the Asylum, and it will be

seen that four months later they had increased remarkably in weight. I may add that they have continued to do well.

TABLE 5. Data of a Group of Infants Committed to the Asylum from Boarding-Out Homes

	No. of Months Boarded out	Age in mos. on admission	Weight (lbs.) on admission	Average wght. for this age	Weight 4 mos. later
1.	6	8	13	17	19.5
2.	10	11	14	19	22
3.	10	11	12	19	20.5
4.	1	5	9	14.5	16.5
5.	8	9	11	17.5	18
6.	9	10	12	18	19
7.	10	11	16	19	20.5
8.	10	12	22*	20	25.5

* Nursed

My purpose is not to insist upon the acceptance of the institutional care of infants as the ideal system, but by demonstrating its successful operation, to warn against the extreme denunciation which is current today. Just because some of our infant asylums have been poorly administered, municipal authorities and many physicians have sweepingly condemned them as a whole and urged the adoption of the boarding out system without a thorough investigation and comparative study of the possible merits and abuses of each. Let us gather abundant and accurate statistics before we definitely commit ourselves against either.

Infants, and by infants we refer to babies under the age of two years, can be reared with success in institutions. The mystic "hospitalism" is not a pervading evil genius which necessarily inhabits infant asylums; it is something concrete and can be eradicated just as surely as was surgical "hospitalism" which was considered inevitable in the pre-Listerian days. Hospitalism simply means lack of proper accommodations, nursing which is inadequate in quality or quantity, insufficient or inefficient medical attention, and, most of all—frequent and multiple infection which necessarily results from such defects. It is not the infants, but, on the contrary, the children over two years of age, who do not thrive in institutions and suffer from this environment. They need the home, they need the fondling, they are stunted mentally by being herded together and never knowing the

mother's care. Children of this age should not be brought up in the wards where their individuality is trampled upon and blighted. They do better when boarded out because they are of an age to respond to the benefits of family life, and are beyond the age when questions of diet and of minor infections play the important role which they do during infancy.

BIBLIOGRAPHY

1. Van Ingen, P.: Proceedings Forty-second Annual Meeting National Conference Charities and Correction.
2. Committee on Vital and Social Statistics, Etc.: Trans. Fifth Annual Meeting Am. Assoc. for Study and Prevention of Infant Mortality, 1914.
3. Chapin, H. D.: Jour. Am. Med. Assoc., January 1, 1915, Vol. LXIV; and Trans. Fifth Annual Meeting Am. Assoc. for Study and Prevention of Infant Mortality, 1914.

DISCUSSION

Dr. Hastings H. Hart, New York: I have five minutes for a discussion which certainly ought to have at least fifteen. This topic is one of practical importance. I think it is entirely profitless for us to debate whether it is possible for us to care for infants properly in institutions and save their lives. We have to deal with the general situation in this matter. I know from personal observation that it is possible under proper conditions to care for infants in an institution, either wet-nursed or bottle-fed and save their lives. It is being done today by the Babies' Hospital in New York City, it is being done by Dr. Coit in Newark, it is being done admirably by the Baby Saving Institution in Omaha, and it is unquestionably being done at the Hebrew Infant Asylum in New York City.

There is this, however, to be said, as a matter of fact, notwithstanding all that medical science has done, notwithstanding the extraordinary reduction of infant mortality in the general population all over the United States, and particularly in the families of the poor, it is, nevertheless true, and nobody can deny it, that, taking everything into consideration, institutions have not kept pace with the general population in the reduction of infant mortality, and if anybody here doubts that statement I wish he would speak right out now and say so. I repeat; it is true that the progress of life saving among infants in institutions has not kept pace with that progress in the general population. Now, in regard to this problem, what we have to do is this—to inquire whether it is possible to extend to the institutions generally the progress which has been made in a few well administered institutions, or whether it is impracticable, as would appear from the expressions of some of those here today, to bring down the mortality in the institutions to normal. The truth is that we cannot find this out at the present time, because we have not the statistics to prove it. For example, take the table before us yonder. There we have 239 children committed under six months and we have a mortality rate among that number of

35. But we do not know the exact age those children were when they came into the institution. The average stay of those 239 children, as nearly as I can make out, was about 85 or 87 days in the institution. The six-months-old baby has lived about 184 days, so that the average stay is less than half of that period. Now, where was that baby the rest of that time, and how many of those children died either after leaving the institution or before? We haven't sufficient data to enable us to get accurate figures as to the actual result. That is true in the State of New York, where I live—we haven't the statistics there to help us. Nobody living can tell what the infant mortality is in the large institutions. Nobody knows today what the real mortality rate is; because what institution statistics we have cover children under two years and the statistics lap over from year to year. But most certainly the mortality of infants is very large in institutions. The proper way to compute this would be to take a thousand consecutive commitments and ascertain how many of those children are living at the end of a year.

With reference to the matter of caring for a child in an institution and out of an institution, there are other things besides merely saving a child's life. I mean to say that the normal child needs companionship. I recall very well being in a hospital where they had a most attractive ward for babies. There were glass partitions between the different rooms, and upon inquiring why those glass partitions were there I was informed that it was partly to enable the nurses to view the whole length of the ward to see whether the babies needed attention, and partly because the little babies got homesick. Without those glass partitions they would be completely isolated and entirely by themselves. I find that babies require a certain amount of personal attention and mothering. I do not quite agree with Dr. Hess in regard to babies being healthier without mothering. I do agree with him in this thing of handling and kissing the babies, but that's a different proposition altogether.

In dealing with these cases in New York, where we have had the privilege of being associated with the Health Department, there is one point I would like to bring to your attention and that is, that, in the cases where we have boarded out babies, the women who have undertaken the care of these babies, with reluctance at first (many of these babies being puny and sickly), seem untiring in their devotion and sacrifice for them. I have never seen anything more beautiful than the consecration and devotion of those women toward these sick babies. They are tireless in their care of them, many times being kept awake night after night attending to them, but discharging the duties laid upon them with the utmost fidelity and love. Many of these women spend more money than the cash they actually receive for their care—spending money out of their own pockets, doing without themselves and giving to the baby. They do not regard the care of these babies simply as a service rendered for so much money, but they look upon these babies as their own, with a consecration, devotion and affection which is simply beautiful. We talk about the plan of placing these children in homes and the adoption of them as a difficult problem; but you take the case of the poor woman who takes the baby with the understanding that

she is not going to keep it permanently; why even then you will find that she invariably will sacrifice her convenience and comfort, that she will make her whole house bend toward it, go out and buy additional furniture, make her entire household over, buy expensive clothing for the child and sacrifice in every conceivable way for its comfort. It is simply a case of absolute self-denial on her part, and she will give herself heart and soul to that baby and its welfare, and enlist every effort with the doctor and nurse to save that child's life.

I want to add finally, that if you will investigate this matter you will find it is absolutely impossible to furnish such care as is provided at the Hebrew Infant Asylum or the Babies' Hospital, except at a large expense. The per capita is 70 cents per day, or \$4.90 a week, and that is not saying anything about the rent of the plant of anything of that sort. The expenses in the Baby Saving Institute in Nebraska are, I think, about \$7.00 a week per baby. They have about one nurse for every two children; and at night they have one nurse for about five or six. You can take proper care of a child in an institution, but the minimum cost of furnishing proper clothes, cleanliness and food, will I venture to say, be \$5.00 a week. Children can be properly cared for, clothed and fed in family homes as has been demonstrated in New York and New Jersey, at considerably less than that. If you put your babies out in family homes, but under such close supervision and under such faithful medical direction and under such regulations as to how the child shall be handled, as have been established in these places I have mentioned, then the family home and care of infants is entirely practicable and it can be applied to a much large number of infants for the same money.

Mrs. J. M. Quennell, Philadelphia: St. Vincent's has had for the past nineteen years babies out at nursing. For the past five years I have had the honor of looking after these babies. This last year—perhaps, I had better tell you of that, we have 175 babies out. About 60 per cent of these are cared for by Italian mothers. Our death rate last year was 3 per cent. That, of course, does not give you the death rate of the home, but simply the death rate of the 175 babies out at nursing. We pay these mothers \$3.66 a month, we supplying the clothing from the home; but, as Dr. Hart told you a few minutes ago, these mothers spend a great deal more on the babies in a great many cases out of their own pockets than they actually receive for their care. Our system is to have a social worker call once a week, at any hour of the day, at the homes where these babies are placed. We have a committee of 14 ladies, who visit the homes twice each month, to see that the babies are in good homes, with clean beds, and are getting the kind of attention we demand, which is, good food, well ventilated bed-rooms, and that the babies are kept clean. If there is anything else that I can tell you about our work, I shall be very glad, indeed, to do so.

A Member: What part of these babies are wet-nursed?

Mrs. Quennell: At the present time we have 49 out of the 175 that are being wet-nursed.

Dr. Hart: Do you pay just the same, that is, \$8.66, whether they are wet-nursed or not?

Mrs. Quennell: Yes, just the same.

The Chairman: Mrs. Quennell, may I ask if your death rate among babies placed out is 3 per cent, how does that compare with the death rate among babies in the institution?

Mrs. Quennell: It is very much smaller. We make it a rule to put out the most delicate babies. Sometimes at first, the foster-mother objects to the sickly baby, but we find in many cases, with a little persuasion, her sympathy for the sick baby soon overcomes this and she agrees to care for it.

Dr. Hart: Can you tell how St. Vincent's came to adopt this plan?

Mrs. Quennell: Because the infant mortality rate was so large at St. Vincent's, and then too they were encouraged by the great success in placing out babies from the very beginning—that is the only answer I can give. I want to say that since St. Vincent's has begun the boarding out system, they have been able to reduce their mortality from 75 per cent to 15 per cent.

A Member: May I ask if you know the average income of the homes in which your babies are placed?

Mrs. Quennell: The average income of our homes is about \$13.00, the incomes range from \$9 to \$25 a week. I have visited every home in which we have placed a baby. We never allow more than two babies in a home. In a great many of the cases where we have a baby being wet-nursed, the woman's own child has died—in fact in most cases.

A Member: Does the mother buy the food?

Mrs. Quennell: Yes, she does.

Dr. Hart: When a doctor is needed, how does the mother get one?

Mrs. Quennell: We have a staff of 18 doctors and we send the mothers to the doctor who represents us in the part of the city where they live. Or if they are near the home, we have a large staff of doctors there.

A Member: How long do you allow the babies to remain out?

Mrs. Quennell: We keep them out until they are 18 months old; then they are brought back into the institution.

Dr. R. B. Hoobler, Detroit: At the Children's Free Hospital, in Detroit, we have practically stopped employing wet nurses. We have now what we call "mother" nurses—and I wish we could all get away from that phrase "wet nurse" and substitute the other term. These mother nurses come to the hospital daily but do not live in the hospital. We get them in various ways. For instance mothers with nursing babies who are sick in the hospital, come every day at feeding time and either give the baby the breast at the time when they are there, or they allow their milk to be pumped if they cannot be there at feeding time and leave it for their babies. We insist that every mother who brings her baby to the hospital to be cared for, and who is able to nurse it, must do so. If she cannot be there at regular feeding times, she must have her breast pumped and the supply left at the hospital for the baby. Sometimes the mother can come and spend the whole day at the hospital. In that event we give her her dinner, and while she is sitting round waiting between nursing times we give her something to sew, and in that way she contributes something in return for her dinner. When these mothers have extra milk they are urged to contribute it for other sick babies in the hospital and it is surprising how quickly they will consent to do this. Often the sight of a tiny wan baby in the crib next to their own baby will arouse their sympathy, and when we suggest that they contribute their extra supply of milk for the very sick baby, they readily consent to do so.

We require a Wassermann test of every mother who furnishes milk for babies other than her own. Mothers who cannot remain away from their homes for any considerable length of time, because there are other children to care for, or because of other duties come to hospital once a day and have their breasts pumped. Some of these mothers have been coming to us daily for over a year. I have one in particular in mind who has been coming every day and whose baby is now fourteen months old. She has weaned her own baby, but she has milk in abundance still, and she brings us the supply just the same. This is in keeping with recent findings by Dr. Holt that the mother's milk when the baby is from ten to twenty months old, is practically as good when the baby is six months old.

We often have some very sickly baby in the home who needs just a feeding or two a day of breast milk, and we get this from one of these "mother" nurses. As to the expense—we estimate that five "mother" nurses supply us with sufficient breast milk for our babies and we pay for this at the rate of \$1.10 a day or about \$165 a month. If these nurses lived in the hospital, the expense of maintaining them would be about \$300 a month. We accomplish the same results and at much less expense. Often there is no room for the mother nurse, and sometimes when they remain in the hospital they are very difficult to control—no doubt you have all had the same experience in this regard. By our method, mothers are left free to care for their other children

at home, and the family life is undisturbed. At the same time they are earning a living wage. So you see we are doing a double charity—one for the family, and one for the baby who needs the milk. I want to add that we visit the homes where the mothers live and keep them under strict supervision, in order that we may know what sort of homes they come from. The visiting nurses who take charge of this for us, see also that the mothers are weighed at regular intervals.

A Member: Do they bring the milk to the hospital or do they pump it themselves at home?

Dr. Hoobler: Sometimes it is pumped at home, but most often at the hospital. We do not allow a mother to pump it at home until we are sure that she is thoroughly reliable. They are taught the necessity for absolute cleanliness, but until we have entire confidence in the mother, we have the breast pumped under the supervision of the nurse at the hospital.

A Member: Are you not afraid that she will substitute cow's milk?

Dr. Hoobler: We can tell by an examination of the milk whether cow's milk has been substituted; we prevent such substitution by having the milk examined regularly.

Miss Ella Harris, of the Department of Public Health, Philadelphia: While conditions in the institution with which Dr. Hess is connected may not be compared with those of the Philadelphia General Hospital, we find that our foundlings and deserted babies have done much better when boarded out, and especially when placed with the wet nurses. This has been the case even when we have had a special ward in the hospital for these babies, which was not a ward where sick babies were placed. Before this meeting somebody suggested that I had better explain how the City of Philadelphia handles its foundlings and deserted children. They, of course, are all brought to the police station and by the police department turned over to us. We do not take for granted that a foundling called so by the police is really a foundling. We make our own investigation and have often been able to trace the parents. In two instances we discovered that babies found in vestibules were born in the house where they were found. In another instance a baby that was found on the doorstep of a butcher's shop could lay claim to the proprietor of the store as its aunt, and so on. But there are a large proportion of them whose parents we never can trace. In the first place we give the foundling a name. I was rather distressed by the shurring way in which the system of choosing names from the telephone book was mentioned in "Daddy Long Legs," for I must confess the Department uses the telephone book method in naming babies. Our system is this—we take so many names—say a hundred—last names, common ones, from the telephone book (taking care, not to use the names of prominent citizens of Philadelphia); then we select about 50 boys' and 50 girls' names. As a boy is

brought in, the first unused boy's name is put with the first unused last name, and that becomes the foundling's name. We cannot tell in advance, what the combination is going to be, as we never know whether the next baby will be a boy or a girl. The baby is given a birthday, which is based on the estimated age of the child, and this birth rate is registered with the Division of Vital Statistics. It is very important for a child in later life to be able to go and get this information as to the date of his birth, so we give them a start in life as to name and birthday. Then we try to give them a further start in life by boarding them out, just as soon as it is possible to do so; that is, as soon as we can get a negative Wassermann test, not because the baby is necessarily in good condition at all, for very often the doctor says to us, "This baby hasn't a chance if it stays in the hospital, but if you will take the chance and the wet nurse will take the chance outside, try it." And many of these babies have survived that chance. We are extending the service this year not only to babies who are wards of the city—deserted and foundlings—but to other babies whose mothers are brought into our large General Hospital for an operation or other treatment. We board these babies out in spite of the fact that we have a wet nursing service for babies in the hospital, and at the present time have seven visiting wet nurses. The Department only places babies with wet nurses who are certified by the Children's Aid Society as having had a physician's examination and a negative Wassermann test. That result of the Wassermann test is filed on the baby's chart at the hospital. We pay from \$3.50 to \$5.00 a week to the wet nurse for each baby. The majority of nurses are getting \$5.00 a week. A lower rate is paid for colored babies. That full amount goes to the nurses. Clothing, medical attention and supervision are provided by the Children's Aid Society in addition, without cost to the Department. Since we have been doing this work we have placed out 101 babies, and of that number 18 have died. That is a little less than 18 per cent. Those babies did not die while with the wet nurse in most instances, but were brought back to the hospital to die. The deaths are considered a result of the boarding out system, or, in spite of the boarding out system. Now, I do want to impress upon you the fact that these are not selected cases. No institution that was in a position to select cases for an experiment of the boarding out plan would ever have chosen these babies. They came to us in a precarious condition, some only a few days old, having been shut up tight in a suit case, or exposed without proper clothing on a doorstep. Now I am just as hungry as Dr. Hess and other speakers for some statistics on this subject. I do hope that when we compare the results of institutional care and boarding out care, that the age and condition of the baby when placed out will play a large part in that comparison, and I am afraid until that is done the advocates of institutional and boarding out care will each continue to present their own statistics to prove their own points.

Dr. J. H. M. Knox, Baltimore: This has been an exceedingly interesting discussion, and I feel that we are under great obligations to Dr. Hess for showing that institutions can be so conducted as to reduce infant mortality to

a large degree. Sometime ago I read a paper before this Association in which I pleaded for the boarding out of more babies, on the ground that as institutions are now conducted throughout the country the boarding out system was far preferable. For one institution such as Dr. Hess conducts, there are hundreds in which the infant mortality varies from 50 per cent to 100 per cent. On the other hand, whenever boarding out, under proper supervision, has been tried, the mortality which is usual in institutions for the same class of children has been reduced about 50 per cent. I have cited before the experience of Baltimore which is similar to that of many other places—when our city foundlings have had institutional care, there has been a mortality of from 80 to 90 per cent—perhaps 95 per cent. When homes have been found for cases of that sort, or for the illegitimate baby and its mother, the mortality has been cut down at least half. That has been our experience in the care of about 400 mothers and babies. These are facts we cannot gainsay. My own experience has been very limited in placing out convalescent children from the Thomas Wilson Sanitarium in Baltimore. There we have found that after babies are in fairly good condition, but not gaining, they gain more rapidly when placed in one of a dozen homes within a mile or two of the institution, which is itself in the country. I think we ought to emphasize one thing particularly and that is, in my opinion, that it is the individualistic care which is the important factor. I agree with Dr. Hess about the foolishness of “mothering,” if he includes by that useless caressing and unnecessary handling, but I mean by individualistic care—proper care, such as is perfectly possible in a proper kind of home. It seems to me we can't go back of the fact that the home is the natural environment for a baby.

The Chairman: I will ask Mr. Edwin D. Solenberger, General Secretary of the Children's Aid Society of Pennsylvania, to continue the discussion.

Mr. Solenberger: Like Dr. Hess, I should like to have more information about the death rate. It would be a decided advantage if we could each year submit our reports in regard to mortality according to some definite plan. Would it not be well if each affiliated society could come to the annual meeting, submitting on a uniform basis such facts as we have been able to get concerning the results of our work, not only in the prevention of infant mortality, but in the well-being of those who survive? If for a period of years we could all use the same method, it would doubtless assist in computing the mortality in the particular group of children with whom we deal. The comparison that would then be possible would be helpful to all of us.

Doubtless we are all anxious to adopt the very best kind of care. We need more help not only in determining the best plan for ourselves but particularly to persuade our constituents to help us to put into operation the things that we already know should be done. Perhaps some committee of this Association can work out statistical tables that could be used by all of the members.

While exact statements that can be compared with the work of other organizations may not be possible now, I am able to make a small contribution as to the results of wet-nursing.

We had 16 nursing babies in care January 1, 1914, and during the past year 21 more were received, making a total of 37 during 1914. The average age of the 21 babies when received was about ten weeks. They remained with our wet-nurses an average of about seven months, and made an average gain of about six pounds each. At the close of 1914 there remained 11 of the 37 in care during the year. Five of the babies did not improve and died during the year. One of these was very weak and died three days after being received. The death of another was caused by whooping-cough, while three others died of gastro-enteritis during the summer while in the hospital for treatment. This is a death rate of about 13 per cent of the whole number of infants in care during the year. While an exact comparison is difficult, it may be of interest to note that 12 per cent of the infants born alive in Philadelphia in 1914 died before the close of the year. When one considers the skilled care and watchful effort in the average home to give the baby every chance to live, it is evident that the results with these neglected and abandoned babies are very encouraging. The Children's Aid Society is doing this work under the guidance of experienced physicians, in an effort to reduce the mortality among neglected babies. In addition to the general physical examination the Wassermann test is used for both babies and wet-nurses. We are under special obligations to the municipal nurses and to the Visiting Nurse Society for their cooperation and help.

Dr. Collins H. Johnston, Grand Rapids: About three years ago, in the pediatric section of the American Medical Association, a member claimed the lowest death rate in this country for a St. Louis institution. I referred him to our clinic in Grand Rapids as being considerably lower, and he questioned, I think, the accuracy of my figures, so I referred him to Dr. Hart, who had recently been in Grand Rapids, and he confirmed my figures and found them to be right. Before saying anything further I want to thank Dr. Hess for his paper. I had a good case of the "blues" after hearing Dr. Knox's paper last year, and thought we certainly must be on the wrong track in Grand Rapids. On going over our records today I find that in our institution of 40 children under one year of age and 60 children over two years of age, our death rate in the year of 1914 among the children under one year was 7.2 per cent. Forty-four per cent of these children were ill when they entered the institution. You may ask why I don't separate the sick and the well children, but that is almost impossible. For instance, one baby entered as a well baby died of heart disease, and another died of meningitis, and so on. I find the death rate among children at our institution under two years of age was 5.7. That is much lower than any record quoted here today.

Miss Ellen C. Babbitt, New York: Dr. Baker's paper calls attention to the remarkable resources available in New York City for giving home, rather than institutional care to babies who are city charges. One of the very serious evils of the institutions in New York City, is their overcrowded condition especially in the wards for the very young babies. How does it happen that there are so many little babies in the institutions? By whom were they sent? The Committee on Social and Vital Statistics of this Association answered the question in its report in 1914, read at the Boston meeting. Four hundred and fourteen babies, under one year of age, were committed by the Department of Public Charities, to one institution, in 1913. The report further showed a mortality of 451.6 per thousand among these babies.

The Department of Charities demonstrated during July and August, 1915, that the number of babies committed to the institutions can be materially decreased. Three hundred and sixteen applications for commitment were made during these two months. After a careful survey of the city's resources for other than institutional care for babies, it was found necessary to commit only 76 babies under one year of age, because these resources were utilized. If this same rate were maintained for twelve months there would have been 156 babies committed in 1915, as against the 414 in 1913.

Dr. Julius Levy, Newark, N. J.: In this discussion I am reminded of the position that was taken by a certain gentleman in regard to the Widow's Pension Bill. He pointed out that he was opposed to the pensioning of widows because widowhood was preventable and that if the money that is to be expended for pensions would be diverted for the prevention of tuberculosis, occupational diseases and accidents among the husbands the women would not become widows and the state would save much money. Too often our tendency is to offer an immediate and quick solution of a pressing problem, rather than attempt to determine whether our problem could not be prevented. So in regard to the question whether the foundling ought to be placed in an infant asylum or with a foster-mother. We seem to have lost sight of the fact that our efforts ought to be concentrated upon the conditions that produce the foundling or make it necessary for mothers and parents to board out their infants and children. In short, our attention should be directed not to the infant alone but to the group, mother and baby. I think we should oppose the institutional plan for the care of foundlings and infants just because it makes it easy for people to place and dispose of their infants and for society to forget that for every infant boarding in an institution some mother with a real problem is at large and being neglected. The boarding out system in private homes is better, to my mind, just because it compels us to fix the responsibility for the care of the baby upon the mother and the father and compels social workers to try to work out the mother's problem at the same time that they are trying to place the baby. This has been our view in Newark and I believe we have made a beginning in the handling of this question. I should like to point out to you that this question does not only concern foundlings but that many married couples

come to us desiring to board out their babies or to place them in institutions and that many of these couples would be rid of their babies if we had a free and easy placing out system as is usually the case when an institution exists in the city.

I wonder if we all remember how the infant asylum came into existence? It was established, I believe, by sympathetic individuals who discovered that many unmarried mothers committed infanticide in order to get rid of their infants and who thought that they could save the babies by establishing an institution where every woman, without the necessity of answering any questions, could deposit an infant. It prevented infanticide, perhaps, but our experience shows that it has become a prolific cause of infant mortality. The institutional care of foundlings and dependent infants is wrong in principle, no matter how good the institution and no matter how low the infant mortality, because it removes from society that most serious problem—the unmarried mother.

Dr. Joseph S. Wall, Washington, D. C.: This discussion it seems to me this afternoon is very much like the midwife question we discussed yesterday morning, except that yesterday, it was suggested that all the midwives be thrown into the Delaware River, and some here today may want that done with the institutions. Dr. Hess seems to be about the only champion of the institutions. In the first place, I do not believe we know what we are talking about in our discussion until we have a standardization of figures. Dr. Hess mentioned the difficulty he encountered in finding a suitable standard upon which to build his report of institutional mortality. I hope that this association as a result of the presentation of this symposium will take the necessary steps to bring about some systematic standardization of institutional mortality statistics.

The figures from Grand Rapids are very fine. We do not know, however, how many children pass in and out of that institution, and whether the stay of its infant population is individually long or short.

In Washington, where we have a foundling home, we believe that our figures have been rather low, and yet in presenting them, I would say that they are open to the very same objection which I have just stated pertains to all such statistics. The mortality three years ago was 5 per cent, based upon the number of children treated during the year. Last year it was $3\frac{1}{2}$ per cent and this year it was 8 per cent, the increase being due to the prevalence of an epidemic of whooping-cough. Four babies were lost from this cause and three from prematurity.

Another point introduced by Dr. Baker was the proper supervision of the foster-home. This is the most important item in all boarding-out systems, but it would seem quite useless to me to build up a separate machinery for such supervision, when there already exists the well developed organization of infant welfare centers for this much-needed control and supervision.

I hope we will adopt this system and I think we will ultimately come to it just as we will some day eliminate midwives.

Just another point. I think Miss Harris said that Philadelphia pays \$5.00 a week for boarding-out its babies. It is a surprising fact that in Washington it costs \$12.00 a month to board a dog, while babies can be boarded for \$11.00 a month.

Dr. Charles J. Hastings, Toronto: I want to endorse most heartily every word that Dr. Hart has said. Careful investigations in Toronto of babies in institutions and those cared for in the foster homes, revealed the fact that the mortality in institutions was three to four times greater than that in the foster homes. Now there are statistics and statistics, but I couldn't help but feel that when Dr. Hess gave us his figures this afternoon, and when we listened to those from Grand Rapids, that, perhaps, they were a little over-estimated, and that when these gentlemen have their statistics revised they will be somewhat surprised. It is hard for me to conceive of any institution so unique and so different from the experience of institutions generally as those cited here today. Then there is the other extremely important side to this question—the point that Dr. Hart emphasized, and that is the influence of the babies on the home into which they are placed. It would be difficult to overstate what it means to a childless home to have a new life come into that home, as well as the developing and stirring up afresh of the maternal spirit and the maternal instinct that had become more or less latent through the absence of a child in that home. I don't think we can put too high a value on that. In addition to that, we have today the advantage of efficient supervision of these foster homes and the follow-up system—watching the baby carefully, seeing that it is properly cared for, and so on. I don't think there can be much doubt that in the future the institutional care of babies will very rapidly become a thing of the past.

Mrs. Robert G. Hill, Grand Rapids: I would like to add that the figures that Dr. Johnston quoted could not possibly be obtained if it were not for our wet nurses. We engage in that institution all the while from two to five and sometimes seven wet nurses. And another thing, we demand from the nurses in charge of those babies constant mothering. They must visit with the baby—they must smile at the baby. That is one of the biggest rules of the institution. The babies are not handled, but they must be mothered. We have been aiming at the ideal, which we have not been able to secure in the placing of the children in boarding homes. We have children brought to us every day from boarding homes. I have in mind now two little boys who had been placed in eleven different boarding homes in one year and came into our institution with adenoids, enlarged tonsils and other deformities. They had been fairly well supervised by another organization.

Dr. S. Josephine, Baker, New York: It seems to me that this meeting has opened up a new line of work for this Association that might very well take the place of our annual "elimination of the midwife." This subject, offers, I believe, one of the greatest contributions we can make to the problem of the reduction of infant mortality. I want to say that I am in hearty accord with Dr. Levy, of Newark. I think his suggestion contains the real solution of the problem, that is, that we should not consider what to do with the foundling, but, rather, how to prevent the foundling. This question is of far more vital importance than the relative value of institutional versus home care.

In New York City, by law, the Department of Health is required to supervise the foundling babies boarded out in homes, and at the present time we have about four thousand permits issued for this purpose. We maintain a staff of five doctors and twelve nurses to personally supervise this work. The babies are visited at regular intervals, the foster mothers instructed in baby care, and both kept under close supervision. I believe this system to be fairly efficient.

The crux of the statistical problem is, to my mind, the condition of the child on admission to the institution. There are a large number of institutions which can show remarkably good statistics, but, on closer investigation, not only will one find that the question of the number of children entering and leaving the institution must be considered, but, also, that in many instances only selected types of infants are received at the institution in question; they do not take the deserted foundling, who may be ill or even moribund. My purpose in reading this paper today is to see if something cannot be done about the care of the peculiarly helpless and hopeless type of foundling. The number covered in our study was, of course, small, but in no sense did it relate to the number of those infants of the better physical type who are now under supervision. It concerned itself solely with the group of the poorest type of infants. In the institution to which I have referred there is a special ward maintained for this class of infants, and it was an understood thing that no baby who had ever been placed in this ward came out of it alive. Among this class of seemingly hopeless cases we have reduced the mortality one-half.

Dr. Hess: I have very little to say in addition. I did not expect a very hearty welcome for a paper which pleaded for the care of infants in institutions. I was very much pleased, however, and gratified that I was able to read a paper that could dispel such a common and disagreeable disease as the "blues," as in the case of the gentleman from Grand Rapids. It has been emphasized that the conditions under which these children are kept in institutions are so exceptional that they must not really be considered in regard to the problem in general. That may be so; however, the conditions under which Dr. Baker treated her children, with all the nursing care and the medical care and the general attention—the physicians coming at any hour of the night when called—etc., are fully as exceptional, if not more so, compared to the general boarding out system. In that connection, I want to ask Dr. Baker one or two questions. As I remember, the cost for the first period was about \$1.12, and

then the babies did so well the cost for the second period was about half that amount. I want to ask whether she thought by that time, the second period, the children were doing much better, were much healthier and weighed a great deal more. I want to ask whether she thinks that had she begun with the second system—with the system where they cost, I think, 68 cents a day, she could have obtained as good results. I would like to know also what proportion of those children were getting breast milk.

Dr. Baker: The reason the first period of our work was carried on in so costly a manner was because of our full appreciation of the condition of these babies. We did not expect them to live; indeed, it was a question as to whether they would survive even while being taken to the home of the foster mother, consequently we surrounded them with every safeguard. When we found that it was possible to keep a certain proportion of them alive, we then determined to see how economically this could be done, and the present method is the result.

Dr. Hess has asked what proportion of the children were getting breast milk. Only one received breast milk throughout the time that it was boarded out; breast milk was used in one other instance, but for a few weeks only. The rest of the babies were artificially fed and could not have taken breast milk, even had it been available, because of their extremely weakened condition. The children during the second period were in no better physical condition than were those of the first period; it was simply that, with greater familiarity with our subject, we felt more competent to handle this class of cases.

Dr. Hess: There has been a confusion, it seems to me, throughout the discussion in regard to the bottle-fed and breast-fed children. You can discuss the boarding-out of children versus institutional care of children, but when you do that you have to discuss infants that are receiving the bottle either in boarding homes or in institutions, or you have to discuss those two groups of infants being nursed, but you cannot discuss bottle and breast-fed infants indiscriminately. For instance, one of the speakers spoke of Blockley and mentioned the boarding out of infants and that they were receiving breast milk, or were being nursed. Now such children, of course, cannot be adduced for or against institutional care. If we are going to continue to consider this question for another year and try to get statistics, we shall have to consider this point. There is no doubt that a baby boarded out and being nursed will do better than an institutional child that is getting the bottle, and there is no doubt that an institutional child being nursed will do better than a boarded out child getting the bottle. The conditions as regards the feeding must be the same in both instances.

NURSING AND SOCIAL WORK

November 12, 1915

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STATEMENT BY THE CHAIRMAN:

The Committee, before formulating this program, reviewed those of former years and found that in the first two years there were general surveys of infant welfare nursing; in the third there was a careful study of standards of education and practice in special infant welfare nursing; and, last year, stress was laid upon the effect of follow-up work and prenatal care. These programs confined their attention largely to work in cities, therefore it seemed well to give attention to the needs of the great number of more or less isolated nurses throughout the country who are obliged to work alone or in small groups and to do general rather than special nursing if small communities are to have public health nursing care of more than one group of citizens and of more than one class of diseases.

During the first five, six or seven years of this campaign, the work naturally developed almost entirely in large cities and, as you know, directly in response to the awakening consciousness of the public, just as it has been awakened to the great importance of better school hygiene and other health movements.

Along with these specialized interests have come special appropriations, special machinery established for carrying on these various

propaganda, and, necessarily, specialized workers. It was inevitable and highly desirable that we should have, for a considerable number of years, at least, these specialized workers in order that they might blaze the trail, that they might study intensively the several problems and established programs and standards of work to meet the needs. However, the pioneer workers have developed fairly satisfactory standards for their work. In the last few years many towns, villages and even rural communities where the people have not the money to furnish many nurses have been stimulated by State Boards of Health and private agencies to inaugurate infant welfare, tuberculosis and other health measures. In these smaller communities, if the people are to have more than one service they must have a nurse who is prepared to do more than one kind of work. Up to the present time, schools of nursing have not equipped their students for service in any one of these public health movements. Therefore post-graduate courses have recently been established. These courses are not yet adequate, but they furnish a reasonably good preparation for the care of infants, school children, and victims of tuberculosis, together with general medical, surgical and obstetrical cases. For this reason, many are coming to believe that with a little longer course of study and a considerably extended period of practice under expert supervision, it may be possible to prepare a nurse adequately to do not only acceptable but thoroughly effective work in each of the specialized activities, although serving as a general nurse. (Allow me to say—because it is only fair to the National Organization for Public Health Nursing—that I do not represent that organization in what I have just said, there are honest differences of opinion within the organization as well as outside of it.) We hope to have this question thoroughly discussed from both sides so that there may be something concrete and definite to take away from this meeting that will help many of us to work out the problem still further in behalf of small communities and isolated nurses.

As an introduction to this discussion, I will ask Miss Le Lacheur to read her report on the questionnaire which she and several members of the committee sent to approximately 400 small associations in various parts of the country.

REPORT OF A STUDY OF SELECTED COMMUNITIES WHERE INFANT
WELFARE NURSING IS DONE ON A SMALL SCALE, INCLUDING
A SUGGESTIVE FORMAL PLAN IN WHICH THE VARIOUS
FORMS OF PUBLIC HEALTH NURSING ARE
REPRESENTED

MISS BESSIE S. Le LACHEUR, R. N., New York

The Committee on Nursing and Social Work was asked a year ago to present and consider at this meeting two questions: 1st, "What have the nurses in small cities, towns and rural districts been able to do toward *furthering* the cause of infant welfare?" and 2nd, "How can a definite program of infant welfare work be fitted into the daily duties and responsibilities of general public health nurses working alone or in small groups.

The value of infant welfare work has already been demonstrated in cities. It is now so unquestioned, that no large city of the United States can consider itself up to date without its program of infant welfare work, including provision for pure milk, conferences or clinics for babies, with doctor and nurse in attendance and nurses visits to homes. Not only is this true of cities, but the New York State Department of Health has the distinction of being the first state in the Union to officially recognize the claim of the child, by the formation in the State Department of Health of a special division on child hygiene. After one year of organization the infant mortality rate showed a marked decrease.

The specialized infant welfare work of cities has proved the value of the work to the entire country by a greatly lessened death rate, much lower than in many small towns and country districts, but it is absolutely impossible, *even if it were desirable*, that small towns and villages should carry on their work in the same specialized way. How then are they doing it, or is it being done?

In an attempt to find whether infant welfare work is definitely carried on, and if so, how effectively, a questionnaire was sent to 470 associations. A copy of the questionnaire follows:

City or Town.....State.....Population.....
 Name of organization.....Office address.....
 Name of chief nurse or secretary.....
 No. of nurses.....Are they hospital graduates.....or hospital pupils in
 training.....Do they give nursing care.....or instruction.....
 Do you do—Medical.....Surgical.....Contagious.....
 Tuberculosis.....School inspection.....
 Obstetrical 1. At time of delivery.....Infant Welfare 2. Well babies.....
 2. After delivery.....3. Sick babies.....

PRENATAL

How many nurses do only prenatal.....only infant welfare.....
 Is the prenatal nursing combined with attendance at delivery.....with postpartum
 care.....with infant welfare work.....Do your nurses canvas for
 cases.....How do you get cases.....
 Have you sent out any sort of printed matter for all new-born babies.....
 Have you had any press publicity.....Have you had moving pictures, public
 lectures.....Have you used posters and placards.....
 (Kindly enclose copies if possible). How much has your work grown since its first
 year.....To what do you attribute the growth.....
 How early in pregnancy do the nurses begin supervision.....Is it limited to
 primipara.....Is it in connection with a pregnancy clinic.....
 If so, how early in pregnancy are women examined, measurements taken, etc.....
 Is the urine examined.....By nurse.....By physician.....How often.....
 How often are prospective mothers visited.....On what subject is
 instruction given.....

(If printed instructions are used please enclose copy with reply). Is a systematic
 effort made to have a gynecological examination for the mother before she is discharged
 as cured.....

INFANT WELFARE.

Do you have conferences for well babies.....Clinics for sick babies.....
 A combination of the two.....Is there a physician in attendance.....
 Is there an age limit to the children cared for.....If so, what is it.....
 Are sick children given nursing care in their homes.....If not, are they referred
 to some other organization.....
 Does the physician from the clinic visit sick babies in their homes.....
 If not, to whom are they referred.....Is milk modified by your
 nurses for special cases.....Or is all modification taught to the
 mother.....Is this teaching given in station.....At home.....
 How often is each child visited.....Do your nurses follow up babies
 discharged from hospitals.....If not, by whom is it done.....
 Is there any direct connection between hospital work and your baby
 clinics or conferences.....
 Do you receive funds from the city.....If so, is it on a basis of per
 baby.....per visit.....or a fixed sum.....
 Do you consider it possible to combine thorough infant welfare work with the general
 visiting nursing.....Does the bedside care of the acutely ill
 prevent or make difficult regular attendance at clinics and regular instructive visits to
 well babies.....

Please give any suggestions on how a definite program of infant welfare work can be
 fitted into the daily duties of a general Public Health nurse working alone or in small
 groups.

The larger number were sent where nurses are working alone or
 in small groups. 272 were sent to places with a population of from
 200 to 25,000; 198 to places of over 25,000. To these 470 question-
 naires 215 replies were received sufficiently well filled out to allow
 for tabulation. These replies represented 35 states; 122 of the 215
 replies were from places under 25,000; 93 from places over 25,000.
 Besides these 215 answered questionnaires, 16 were received too in-
 complete for tabulation, and 25 letters. Some of these letters indi-
 cate that the work is being done, but the nurses were evidently scared

by the questions. Some show eagerness, but lack of understanding as to how to begin. In some places the work had been started and failed, evidently through inadequacy of the nurses who had been tried, and in some places the work was yet in process of organization. In a few instances secretaries wrote describing the nurse's work and after reading the description and the remark, "One nurse is on duty 24 hours a day, 7 days a week," it was not surprising that the nurse herself didn't answer the questionnaire. In all there were 256 acknowledgments.

116 replies came from associations with 1 nurse

33 replies came from associations with 2 nurses

66 replies came from associations with 3 and over

Tabulated Report of 215 Associations from 35 States

	1 Nurse	2 Nurses	3 Nurses or Over
Total Association	116	33	66
Graduate Nurses	114	28	55
Undergraduates	2	5	11
Special I. W. Nurse.....	...	7	28

Kinds of Nursing Done

Medical	11	32	63
Surgical	103	29	61
Contagious	25	6	14
Tuberculosis	92	24	46
School	58	10	17

Maternity Work

Prenatal	90	23	40
In connection with clinics.....	5	5	20
At Delivery	64	11	14
Post-Partum	102	26	52
Systematic effort for gynecological examination before discharged cured.....	23	6	13

Infant Welfare

Well babies	74	22	47
Conferences for well babies combined with clinic for sick.....	35	14	34
Milk modification taught by nurse.....	88	26	57

Follow-up Care

Follow-up care from hospital.....	44	14	27
Direct connection with hospital.....	11	5	16
If not, by whom.....	None	1 social service	8 social service

Results of tabulation show that of the 116 associations employing 1 nurse, 114 were hospital graduates; 2 were hospital pupils in training under supervision of the hospital. Of the 33 associations with 2 nurses, 28 had graduates; 5 had each one pupil in training. Of the 66 associations with 3 nurses and over, 55 had graduates; 11 had some pupils in training. If this is a legitimate field for training pupils, it is a pity it is not more widely utilized. In all associations to the questions, "Do you give nursing care? Or instruction?" the answer was almost without exception, "Nursing care *and* instruction."

To the question, "How do you get cases?" it was interesting to note that besides doctors, friends of former patients, hospitals, churches, social workers and such regular sources, the Metropolitan Life Insurance Company was frequently mentioned. Records of births were spoken of and in small country towns birth notices are often obtained from the local newspapers. Even in the smallest villages where everybody might be expected to know everybody else, sometimes the nurse canvassed for cases and left literature on the care of the child. This literature was frequently mentioned as coming from the Metropolitan Life Insurance Company.

115 associations said they had press publicity

74 had moving pictures or lectures

68 had used posters or placards

69 left printed matter regarding new-born babies

The reasons given for growth of the work were in general "good work and publicity."

Comparison of Maternity Work

153 out of the total 215 associations give prenatal care.

90 of the 116 associations with 1 nurse are giving prenatal care, which is a remarkable record for such a new branch of the work, but only 5 of the 90 are in connection with a maternity clinic. The supervision of the mother is begun in 50 per cent of the cases "when first reported."

23 of the 33 associations with 2 nurses are giving prenatal care, 5 of the 23 in connection with a maternity clinic; supervision begun in nearly 75 per cent of the cases "when first reported."

40 of the 66 associations with 3 nurses and over are giving prenatal care. 20 of the 40 in connection with maternity clinic; supervision is begun in 87 per cent of the cases "when first reported."

18 who said they were doing prenatal work did not answer the other questions regarding it. In the remaining associations supervision is begun from the 4th to the 7th month. In only one case is it limited to primiparae.

To the Question of Examination and Measurement

16 of the total answered "when first reported."

13 said from "5th to 7th month."

The others either did not answer the question at all, or said, "it varies with the doctor."

To the Question of Urinalysis

50 of the 90 working alone answered "Yes."

25 said "Left with the doctor."

15 did not answer.

In the associations with 2 or more nurses, 61 out of 63 said the urine was examined; 75 per cent of tests were by the physician; 25 per cent by the nurse; sometimes by both.

In answer to the question "How often is the urine examined?" and "How often is the patient visited?" 38 out of a total of 153 did not answer. The common reply of all others was from 2 to 4 weeks. 2 or 3 said every 10 days; several said every 4 weeks up to the 7th month, then every 2 weeks. The instructions given to all expectant mothers were of striking uniformity.

Attendance at Delivery

In one-half of the associations with 1 nurse attendance at delivery is the rule.

In one-third of the associations with 2 nurses.

In one-fifth of the associations with 3 or more nurses.

This shows it to be essentially a practice in rural districts or small towns.

We awaited with great interest to see whether a systematic effort was being made to have a gynecological examination for the mother before discharged as cured, and were gratified to find that

22½ per cent of nurses working alone

24 per cent of associations with 2 nurses

25 per cent of associations with 3 or more nurses

were doing so. Several nurses wrote they would now begin to make such effort.

Infant Welfare

As to oversight of well babies

63½ per cent of nurses working alone

66 per cent of associations with 2 nurses

71½ per cent of associations with 3 or more nurses answered that such oversight was given.

Conferences for well babies are combined with clinics for sick babies

By 30 per cent of nurses working alone

42½ per cent of associations with 2 nurses

51½ per cent of associations with 3 or more nurses

In 72 out of total 83 conferences there was an age limit for the children, varying from 2 to 12 years. In the larger number the age limit was from 2 to 3 years.

The doctor is usually in attendance. In 13 out of 83 conferences he is on call.

Milk Modification Taught by Nurses

76 per cent of nurses working alone

78 per cent of associations with 2 nurses

86 per cent of associations with 3 or more nurses taught milk modification, and with only 5 exceptions the modification is taught in the home.

How Often Children Visited

Everyone answered—sick children, daily; well children—average 3 to 4 weeks. Some said every 10 days. In many cases the question regarding well babies was answered by "It varies."

Follow-up Care From Hospital

44 of the 116 associations with 1 nurse do some follow-up work from hospitals.

11 of these have direct connection with hospitals; otherwise no follow-up work is done

14 of the 33 associations with 2 nurses do some follow-up work

5 have direct connection with hospitals

26 of the 66 associations with 3 or more nurses do follow-up work with direct connections in 16 associations

9 answered that the Hospital Social Service Department does some follow-up work

This would indicate that in 122 out of 215 places there is no connection whatever between the discharge of the patient from the hospital and the home, a serious lack of co-ordination toward which our best efforts must now be directed.

Funds From City or Town

In 58 of the 215 associations, or 27 per cent, funds were received from the city or town. 53 paid a fixed sum; 5 paid on the basis of per visit.

To the Question Is Combination of Infant Welfare Work and General Nursing Possible

Here the answers to the questionnaires would seem to show that in many small cities, towns and rural districts, nurses are now definitely doing infant welfare work together with general public health nursing.

100 answered "Yes;" many added "with a good nurse and not too large a district."

26 answered, "The very problem we are working on"

42 answered "No;" the reasons given, "Nurses not educated for it." "Advisory work sacrificed when done in connection with sick nursing."

1 speaks of the danger of contagion.

47 either do not answer or put an interrogation point.

It is encouraging to report that many of the answered questionnaires were accompanied by personal letters bearing evidence to the fact that the nurses are alive to the need of better work. They write that many of the women among whom they are working are ignorant of the real essentials of proper infant care, and that they know this lack of information is a large factor in the high infant mortality rate of their districts. Some nurses even thanked us for the privilege of

receiving the questionnaire and said that it had given them suggestions, and another time they would not have to answer "No" to so many questions. Their eagerness for more information was marked. Almost everyone who wrote asked for all possible suggestions that might help them to do better work. Many asked, "What are the other nurses doing who are working alone?" Several mentioned the great help they had received from the pamphlets on "Prenatal Care" and "Infant Care" sent out by the Children's Bureau at Washington, and hoped that all nurses working alone knew about them.

This suggests the need of more effort towards keeping all nurses informed of the progress in public health work, whether this be done by nursing associations, nurses' magazines, state or local bulletins, or in some other way.

The following are a few quotations from the letters received from nurses in small towns: "I am very much interested in my work for the children"; "To prevent sickness is my message in every home"; "I shall be most grateful for information on what other nurses are doing; I am the only district nurse for 8,000"; "I am trying to work our association into a model one, and many of the mothers in my district are working with me. Please give us all possible suggestions"; "On health is my emphasis always. I think our baby conferences are well attended because I praise the care given the baby every time I possibly can. I never forget it"; "I know that because I have cared for the family in illness the mother listens more readily to my advice." One nurse writes, "The mothers are asking me why more *country* babies than *city* babies die, and it is just the chance I want. Now we are trying to get ahead of the city." One association with 3 nurses writes, "Perhaps we are not doing thorough infant welfare work together with our general nursing, for our visits to well babies are sometimes neglected, but we feel that our results with expectant mothers and baby conferences justify our efforts, make each nurse's work far more interesting, prevent duplication of nurses, and is very worth while."

The campaign for infant welfare has been largely educational, presenting to the public, especially to mothers, facts which proved that many of their babies died unnecessarily. This has been accomplished through popular exhibits, lectures, talks and demonstrations. The Children's Bureau of the Federal Government has recognized the necessity of more than mother's care and has done much by its investi-

gations, reports and pamphlets to distribute information on the subject of health for infants and children. The remarkable progress of the work has probably been due almost entirely to specialization. Nurses have been provided *for the baby alone* with conferences at Infant Welfare Stations and visits to the homes.

In some cities nursing service *for the baby alone* includes well-baby nurses and sick-baby nurses. The well-baby nurse visits the home, and finding the baby ill, instead of treating the child herself, sends for a second nurse who comes to do the actual nursing. The well-baby nurse sometimes continues to visit so that she may properly oversee the feeding of the baby. Sometimes they call at the home at the same time.

In some cities the nurse for the baby alone has entire care of the baby until he is two or three years old. At the same time if another child of four is ill a different nurse must be called for him.

The development of infant welfare work has gone still further. In some cities a special corps of nurses is giving prenatal instruction. This means that many mothers are under the care of one nurse until the time of confinement; then the nurse from a maternity hospital or clinic is in charge. When the baby is old enough he is under the care of a third, a milk station nurse, and if he becomes ill, the general visiting nurse cares for him. In such instances the mother has to become acquainted with and follow the direction of four different nurses for herself and baby. With the exception of the general visiting nurse, all this work has not included care for any other member of the family, however sadly they are needing nursing oversight and however logically the condition of the infant is the result of the condition of the home and family.

To give sufficient emphasis to the value of any work the careful attention of a highly specialized service is essential until its value is proven. It is true of infant welfare, equally true of tuberculosis, of school nursing, social service work of hospitals, mental hygiene, of work with the crippled, with the blind, and all other branches of nursing (perhaps of many fields not yet covered). Now, that the value of this work is proven, the important thing is to get this knowledge into the homes in the most effective way. The knowledge of the specialists of yesterday is the common knowledge of the general practi-

tioner today and of the lay public tomorrow. Therefore, may we not believe that though it has taken specialization to develop infant welfare work the day will soon come when its technique will become part of the visiting or general nurse's common equipment.

When we remember that all work in the home towards better health largely rests *with the mother*, we realize that the instruction should be of the *simplest*, and must be made *uniform* in order not to confuse her. Can we not put ourselves in her place and see how extremely confusing it would be to have the many varieties of nurses making a thoroughfare of our homes, yet not one of them responsible for the welfare of the entire family? In the matter of instruction, variation of method, even though each is equally good, is bound to be confusing to the mother. The need of uniformity of method was first impressed on me by the real distress of a neighbor of ours whose child had typhoid. The mother considered it a luxury to have graduate nurses caring for her child, and was eagerly watching every move of the nurses to learn how to do things. She came to me with questioning and uncertainty and said, "Miss B. does things one way, Miss C. another. I don't know what to do. Which way is right?"—and she was a woman of more than ordinary intelligence. It is especially true with the class of mothers who most need our instruction that one method is all they can grasp. Yet they are expected to grasp and to carry out intelligently the various directions of the several nurses who may be visiting the homes. Instructions are given to the mother by each nurse on her special subject and then the poor, bewildered mother is supposed to co-ordinate these instructions. If the mother without previous training is able to learn how to give intelligent care in a few brief lessons from the specialists, why can not the general visiting nurse as readily be trained?

Moreover, is there not danger to the usefulness of the nurse from long continued specialization? Some nurses through the monotony of repeating over and over the instructions relating to their special work tend to stagnate and after a time many of them object to being responsible for more than their particular branch. One hears such statements as, "General work means so many things to remember. It is much easier just to think about the baby."

To answer our question, "How can a definite program of infant

welfare work be fitted into the daily duties and responsibilities of general public health nurses working alone, or of public health nurses working in small groups," the following suggestions, largely gathered from the answered questionnaires, are submitted:

First: *By trained public health nurses:* The homes are now opened to us for preventive and educational work. It has been estimated that 90 per cent of actual sickness is cared for at home as against 10 per cent cared for in hospitals. Home nursing is surely a community problem. Why then are the training schools not preparing the nurses for it? Why do nurses continue to be graduated from training schools unable to teach mothers how to care for babies, families to care for tuberculosis and everyone how to keep well? Are not the opportunities offered in the homes for teaching better health of sufficient importance to require from the training school a proper preparation for this work? As it is now, a graduate nurse desiring to do public health nursing must look to post graduate schools to meet even in some measure her need of training, and this means considerable extra expenditure of time and money. She is often put to work in a field without any training, being expected to receive it through actual service. With consciousness awakened to the importance of public health nursing, the method of learning by trial and failure is certainly not fair to the people whom she is to serve, nor to the nurse herself. The time for pioneer work in public health nursing has passed; the technique is established and can be taught. A complete staff of trained workers can and should be expected. There is now a steadily increasing number of nurses competent to do public health work trained through post graduate courses, or through actual service, with special lectures and study. Why cannot these nurses be "family nurses," doing every bit of the health work in the particular families under their care?

This brings us to our second point, *small districts*, where the nurse may become acquainted with the well people in addition to the sick; then her intimate knowledge of the families under her care would be of more value to all others working in the interests of those families. In the individual nurse who becomes a real friend in any family there is a tremendous force that we should be utilizing. But besides the loss of this valuable personal influence, we are losing

directly in time and money by not having a single nurse in a small district, instead of several nurses following one another around in a large district. The time spent in transportation could be spent in home visits; the expense of carfare would be much lessened.

Third: *Advertise the work*, perhaps by beginning intensively in a small section. The methods of advertising and of carrying on the work in general must be planned according to local needs and opportunities. There must be a friendly understanding of the people on the part of the nurse; there must be good system to her work. In many rural districts, besides newspaper publicity, a house to house canvass is sometimes feasible. If there is a baby the nurse can chat about the baby in a friendly way. Mothers rarely let you go away without seeing their babies and that is all the opportunity a good nurse needs. To show the expectant mother how to make simple things for the time of confinement, and to offer a pattern of the simplest baby outfit is often a good approach for real prenatal work. Sometimes if the houses are far apart so that the mothers cannot go to the conferences, the nurse carries hand scales and record cards, weighs the babies and registers them. She shows the mother how to care for the baby and leaves printed instructions and other literature. Mothers are so interested in their babies' weight and growth that they watch eagerly for the next visit of the nurse. The good nurse will try to see the other children in the family, and the mother will know she is interested in them,—everyone. One nurse in a rural district where the houses were very far apart advertised that on two afternoons a week at her office in the village, mothers might "check" their babies while they did their shopping. This gave an opportunity for suggestions and acquaintance. If the nurse was called away someone was left in charge who took good care of the babies. Little Mothers' Leagues are of great value and have an especial appeal in country districts where recreation is limited. Care of the baby is taught, a doll or a real little brother or sister used for actual demonstrations. Personal hygiene talks and demonstrations in first aid are given. Little Mothers may have concerts, to which parents are invited, two or three times a year, with demonstrations by the children, and dialogues, recitations, songs about the baby, and refreshments. These methods have proved most successful in some country districts and are equally applicable in small towns or cities.

Where population is scattered, monthly meetings for mothers and babies on child welfare and other practical subjects may be held in different homes, making it a friendly, pleasant time, entertaining as well as educational. Sometimes a nurse is able in this way to help increase neighborly feeling. Try a series of lectures given in the winter months when the farmers and their families have time to attend. Advertise the lectures thoroughly. Make them lively and popular. Have good speakers and moving pictures. The meetings may be held in town halls, schools or churches.

The few nurses who spoke of milk stations said they were open from 8.30 to 10. In the small cities or towns these are the welfare centres for the weekly or semi-weekly conferences for children and talks to expectant mothers. Sometimes school buildings in different parts of the town are used for these conferences. Besides the examination of the children, talks are given to the mothers by doctors and nurses and chances given for questions and discussion. Then the mothers are visited in their homes and demonstration makes the instruction real. It seems to have worked well in some places for the nurses to interest one or more mothers "with good common sense" to help at conferences and in emergencies. If the district nurse is called away they are left in charge to make notes of anything amiss about any baby. Many nurses considered it quite essential that daily office hours be held where the mothers may come for advice and bring children who are not sick but need watching.

No nurse should plan to work alone. Her committee should understand just what public health nursing means. She should make every effort to work closely with all physicians, hospitals or dispensaries, teachers, mothers' clubs, parent-teachers' associations, civic clubs or any group interested in healthier, better homes.

The question of how to provide a family nurse, one nurse and one only in each home, cannot be settled over night. But does it not help that we consider what direction progress should take and that we keep as our one idea to get the necessary knowledge and care into homes in the most effective and economic way?

The Chairman: I believe it is not too much to say that all will agree that Miss Le Lacheur has set forth the need (and our obligation to meet that need) of the small community. Nevertheless, we cannot expect the nurses in

small towns and villages, who are working alone, to establish standards that will meet with the endorsement of specialists, either in the medical profession or in the nursing profession. They have not the opportunity for intensive work, nor the equipment, nor expert advice of pediatricians and obstetricians and social agencies. Naturally, therefore, it could not be expected that any study of this sort would give a complete answer to the question which has been proposed for discussion when it discovered only what was being done in the small communities; therefore the Committee sought the testimony of one or two cities of representative size where the same plan has been tried on a larger scale. In the last six months I have travelled from one coast to the other and I have not found anywhere in the United States a finer piece of coordination of public health nursing service than in Fall River, Mass. Its scheme is not entirely complete, but as far as it has gone it seems to be working most effectively and satisfactorily. While there are still advocates of special as well as general service, it is plain to any careful observer that there is a moving spirit in that city which, beginning with the hospital, has worked out from it, through a visiting nurse association, infant welfare clinics, and district settlement houses into membership of the Board of Health, with the steadfast purpose of developing a community health program. We have, therefore, used every means of persuasion to induce Mr. Richard P. Borden to come and tell us from his standpoint about public health nursing as it exists in Fall River, Mass.

COOPERATION FOR PUBLIC HEALTH

RICHARD P. BORDEN, Fall River, Mass.

When you want to build a house the first thing you do is to make up your mind what kind of a house you want to build and then get carpenters and bricklayers and painters and plumbers to do the work under your supervision. When you want to save the babies why not plan the kind of work you want accomplished and then get those who understand the work to work with you according to their skill, because if you can get somebody else to do the work, it is a good thing to let him do it, and sometimes in spite of your pride in your ability the other person can really do the work better than you can. Now that is about all there is to my paper and when I was rash enough to say that I would come and try to say something, I might have known that the members of such an association as this would have found out that that was one of the things that ought to be done, and through all of the sessions it has been apparent that in different parts of the United States people are already at work under the cooperative plan. It would be a little bit discouraging if it were not for the fact that it is a pleasure to belong to an association which so quickly perceives an opportunity and seizes it. I am coming here to preach to an audience that has already begun to practice. It is my duty to stand here and read my paper, but you have the advantage of being able to steal out if the story is not altogether new to you.

The word charity has two important definitions. It may mean general benevolence, or it may signify simply the giving of alms. Benevolence is an impulse essential to the development of civilization. Alms-giving implies a personal relation between the donor and donee, often harmful to both, and the abuse of which has caused many bitter words to be spoken of institutions labeled charitable.

In his paper on "Organization of Charity," Dr. Lee K. Frankel says, "There was a time when connection with charitable organizations spelt prestige and reputation. Today many charitable institutions are subjects not for commendation but for criticism. * * *

The extremists condemn charity as the most undesirable growth on the

body politic. They hope that the time will come when this word charity will be entirely eliminated from the dictionary."

It cannot be doubted that in some charitable organizations the charitable impulse has degenerated into a feeling of personal aggrandizement of the managers or donors, while the donees have either lost their self-respect, or, forced by extreme need, accept benefits with rancor and a heavy heart. Many, who deserve, refuse the benefits, at great cost, because of the stigma attaching to the beneficiary of a charitable institution. Too often the originators of such an institution, though moved by the impulse of charity in its best sense, foster their own pet enterprise to the injury of others because of the selfish feeling of gratification which they derive from being advertised as leaders in a worthy cause.

The truth is that many so-called charitable enterprises are simply community enterprises for the benefit of all. At the present time they must generally be inaugurated through the impulse of benevolence and friendship, but they should be continued as community enterprises and managed by the trustees as business propositions, without undue consideration for the personal interests and vanities of the managers. Again quoting Dr. Frankel, "First of all, charity work must be conducted on a business basis. By that I do not mean that we should banish sympathy and love and forget the true meaning of the word Charity. Since we are in the midst of a world of organizations, we must run our charitable organizations as intelligent men and women run their business establishments."

A fire department may be said to be a charitable organization. It comes to the assistance of the person in distress. In the early days neighbors, moved by a benevolent impulse, rushed with bucket and axe to help their friend in trouble. In the same sense the public schools are charitable enterprises, for they benevolently assist those who otherwise could not obtain an education. No one ever thinks of applying the unfortunate stigma of charity to either of these institutions because it is recognized that the community interest requires such service and the benefit is reciprocal to all. They have been adopted as a necessary part of community endeavor.

Truly interpreted, hospitals, nursing associations, settlement houses, children's homes, day nurseries, play grounds, and a multitude of other social organizations, are also community institutions—all

more or less intimately related, and capable, if properly managed, of becoming co-ordinated branches of community endeavor, with none of the stigma of charity but with all the satisfaction which may be derived from development of the charitable impulse. Is it possible, however, to induce the originators and managers of the many and varied activities to cooperate so that the machinery at hand will be worked to its highest efficiency, and, if so, would it be worth while? Would the selfish interest in one's own pet hobby prevent such cooperation and would the true benevolent interest, which often supplies the motive power for progress in such enterprises, disappear if, through such cooperation, one institution was placed on a par with another in public estimation?

The attempt here is to indicate that such cooperation means efficiency with no loss of benevolent impulse.

The field is a manufacturing city of approximately 125,000 population. This population is extremely cosmopolitan, comprising English, Irish, French-Canadians, Portuguese, Poles, Syrians, and other peoples in smaller numbers, in the approximate order of their influx. There are many so-called charitable organizations—children's homes, hospitals, day nurseries, a boys' club, Catholic sisterhoods, deaconesses, district nurses, Anti-tuberculosis Society, Society for the Prevention of Cruelty to Children, and other organizations. The dominant business is cotton manufacturing, accomplished by some thirty corporations, with an average capital of, say, a million dollars each.

The problem of cooperation is not, perhaps, as difficult as in other places, because, in proportion to the population, the number of people having thought and leisure for charitable organization is comparatively small.

Until three years ago there was practically no affiliation between the various organizations. The Union Hospital, believing that expense could be saved by keeping people out of the hospital instead of allowing them to become so ill as to require hospital treatment, instituted a district nursing service by securing a superintendent for the then prospective association who should also act as instructor in the nurses' training school, connected with the Hospital, in public health nursing and the care of children. The Boys' Club, having an available room, offered it to the new-born District Nursing Association for headquarters. The Society for the Prevention of Cruelty to Children also had

headquarters in the same room. The manufacturing corporations, instead of each maintaining a hospital of its own, had for many years contributed to the Union Hospital in order to provide a place for their sick and injured employees. Here was a beginning in community cooperation and, upon the establishment of the District Nursing Association, instead of each mill maintaining a nurse at its plant at a large expense, they further cooperated by agreeing to contribute at the rate of 15 cents per year per operative in order that their employees might have nursing service at their homes.

If the hospital was benefited by nursing instruction and care at the homes, it seemed evident that further advantage would be gained by domestic instruction in the homes to prevent, by proper living, the occurrence of illness. According to Dr. Richard C. Cabot, "Habits, economic and moral conditions cause the illness of nearly two-thirds of the patients at our hospitals. This is the weakest point with most hospitals, that they do not make sufficient connection between the patients in the institution and their lives before and after." Miss Lilian D. Wald had already recognized this in the establishment of the Henry Street Settlement, in New York, but she had not patented the idea, and, as a matter of fact, her accomplishment was not then widely known. As a result, the King Philip Settlement House was established as a branch of the District Nursing Association, under the same management, but, in order to preserve the vitally important interest of various persons in different kinds of work, the nursing work was placed in charge of a Committee on Supervision of Nurses, while the Settlement House was in charge of a Settlement House Committee—both committees referring their needs to the managers of the association, and having representation thereon.

With the establishment of a Nursing Association, there came, of course, the establishment of conferences for mothers and small children, and the most desirable locations for such conferences must be sought. The Bishop Stang and the Ninth Street day nurseries were already in operation—both non-sectarian in their output but one under Catholic the other under Protestant auspices. The Immigration Committee, whose object is to instruct immigrants in American citizenship and in simple English adapted to their kind of work (also supported by the manufacturing corporations, at a subscription of one mill per spindle per annum), had an available building. The Weetamoe Settlement

House was established as a branch of the King Philip House, and these, with the Boys' Club, made suitable localities in each of the six nursing districts of the Association—with two advantages: There was no additional rental cost, and the localities were known to and frequented by members of families to whom the conferences would be most useful. The Settlement House conferences, although by no means in the most accessible locality, had the largest attendance of all, showing the intimate relation between nursing and settlement work. The Anti-Tuberculosis Society maintained a nurse to visit, instruct, and care for consumptives. A great deal of time was wasted in traveling from one part of the city to the other, and the nurse often visited families where a district nurse called for other purposes. It was apparent that a district nurse could care for the consumptives in her district without traveling from one end of the city to the other and that there was an additional waste of time and effort in having two nurses call at the same household for different purposes. On the initiative of the Anti-Tuberculosis Society, it was, therefore, arranged that the District Nursing Association should do the nursing work, while the Anti-Tuberculosis Society should continue its general campaign against the disease.

The Seaside Home for babies, independent of any other organization, had each summer made a refuge for sick infants during the heated term, and through its influence many little lives were annually saved. Manifestly, it afforded facilities for assistance in the work of the visiting nurse, who could advise the mother of the opportunity and see that the child could thus get the advantage of fresh air, proper food, and good care so that it might be restored to health. Equally, the visiting nurse and the hospital were of advantage to the Seaside Home, because children discharged from the Home could be followed up by the visiting nurse, and, when requiring further hospital treatment, could be taken care of by the hospital. The Managers of the Seaside Home, therefore, appointed the superintendent of the Nursing Association general superintendent of the Home.

In the lines of their various activities, many of these institutions discovered that the underlying cause was some social difficulty—such as lack of work or improper influences of one kind or another. The Associated Charities was already in existence to care for such cases, and, in addition to its other duties, a confidential exchange was there

established so that all of the social organizations who made use of it could avoid an unnecessary duplication of effort.

The Board of Health maintains two nurses, whose duty it is to visit new-born children, instruct mothers when necessary, and guard against ophthalmia neonatorum, and also to visit newly reported cases of tuberculosis, advise with regard to methods of living, and see that the rules of the Board of Health for the prevention of further infection are observed. Neither of these nurses has time for much bedside care, and, when occasion requires, the Board of Health notifies the Nursing Association, which supplements the work of the Board of Health nurses. Moreover, many infants are born to families where the district nurse has been in attendance for prenatal care or otherwise. Birth reports are forwarded by the Board of Health to the Association and the families where the district nurse has already been in attendance are checked so that instead of the Board of Health nurse they are visited by the nurse with whom the family is acquainted—thus again avoiding duplication of work and obviating the annoyance to the family of additional interference by a nurse whose services are not desired.

Many cases of disease arising from cruelty or neglect are observed by the visiting nurse. There are also cases where a child requires operative interference, but the parents, through ignorance, wilfulness, or indifference, refuse to take the necessary steps. The visiting nurse must be the friend of the family. If she becomes the spy and informer, the news is apt to spread and she becomes less welcome. The Society for Prevention of Cruelty to Children is notified, and, through its efforts, the rights of the child are enforced without any resulting loss of confidence in the visiting nurse.

In order to further harmonize the work of the various agencies, a club of social workers has been formed, which is composed principally of the professional workers. This club has stated meetings, and the various problems which come to one or another of the social agents are discussed and often solved as a result of the broad general information of available means enjoyed by this gathering of representatives.

In the above there is only a suggestion of the many ways in which social agencies interlock. It would be burdensome to follow the details further. It is apparent that the aphorism that a chain is no stronger than the weakest link is not here applicable. Each link, is, however,

made stronger by union with the others. Much is heard about the economic value of efficiency in business affairs, and it should be apparent that efficiency in organization is equally valuable in so-called charitable enterprises because it is economical and produces results.

It will be noted that the majority of these co-ordinated agencies preserve their original identity, and this seems to be, for the present at least, important, because, fortunately perhaps, the sympathies of individuals actively interest them in one line of work while they may be indifferent to another. Some are interested in children, others only in baby welfare; one thinks that the public health is a prime consideration, another believes that social improvement by settlement work or education will produce the highest results.

The musician has no desire to use canvas and brush. The painter and writer may have no soul for music. Let the player, play; the painter, paint; the writer, write; and the people have the enjoyment of efficiency in Art. So in community endeavor. The human, natural element of predilection is too valuable to be disregarded. It not only conserves the activities of those who are truly interested but assists in reaching the pockets of the well to do.

It must not be believed that co-operation may be induced without forethought. When the District Nursing Association was established, care was taken that its board of management should be composed of people representing existing agencies so far as possible, and, as it was quite common to find a person who was already interested in two or more existing agencies, it was not difficult to have the board of managers of the District Nursing Association consist of persons who had direct relations with most of the other agencies and information as to their resources. There have been jealousies from time to time, influenced apparently by the fear that some particular pet hobby had been distanced in the race for popular esteem and support, but these have generally been overcome and are not wholly regrettable because they indicate a vital and live interest in the success of some particular line of endeavor.

In all this work it has been thought desirable to eliminate the word charitable as far as possible. Strictly speaking, a large part of the visiting nursing service is free to those who use it, because of their financial incapacity in spite of the fact that a fair charge is made to those able to pay but many make use of it freely as a matter

of right in cases where the mills pay for the service to their employees. From the point of view of the community, the instruction and care given by the nurse in the homes of the poor is, purely as a matter of business, desirable, while again it is equally desirable that the ignorant immigrants should not grow up into American civilization with the idea that they are to be dependents upon the generosity of the rich. The mill operative has not much money to spend for luxury, and from his point of view the luxury of beer and tobacco for the men, a new gown every year for the women, and moving pictures for both is worth more to him than the luxury of a nurse in sickness and the instruction and proper care for the wife and child. When the mill provides the nurse, however, he is apt to accept her service as a part of his duly earned emolument and is very quick to take advantage without loss of self-respect. It may be that he subconsciously realizes the social truth that each family cannot maintain a nurse for itself and that really he is entitled to the service of a nurse, a hospital, a day nursery, and all the other social facilities just as he is entitled to assistance from the fire department in case of fire.

The natural development of the co-operative system would be municipal control of such agencies, and, in fact, this does exist today to a very considerable extent in many places. It would be a logical development, but it is still a question whether or not such agencies, instituted and maintained by the true benevolence of charity, and governed with business efficiency, are not more productive of good results than a municipal bureau conducted by men who may be principally actuated by a weekly salary or by the notoriety of public office. The desire to assist others, the feeling of benevolence—in other words, the impulse of charity—is a fundamental human impulse, implanted, like all other human characteristics, for some social need, and, properly guided and governed by business efficiency, the influence of true charity on human progress should continue to increase.

Every agency that has been mentioned here has a direct relation with some phase of the problem of infant and child welfare, but the most intimate of all is that of the visiting nurse—because of her personal contact with the families and her knowledge of their needs. I have been asked to suggest a program for the visiting nurse working in association with co-ordinating agencies. Such a program may be summarized by the words to nurse—not only nursing in its now most

generally accepted meaning of caring for the sick but in its broader significance of nurturing, leading, and pointing the ways to health. The foundation of the visiting nurse's work is caring for the sick. Upon this basis her other activities may be solidly built. It is because of her demonstration of usefulness in times of stress that the people repose confidence in her and will, therefore, accept her advice as to proper medical assistance, hospital care, and healthful methods of living. I remember accompanying the medical examiner of a large city to investigate a case of so-called sudden death. A woman had died of consumption, and the only reason for calling the medical examiner was that there had been no physician in attendance to sign the death certificate. The woman had been to a sanatorium, but as the disease progressed insisted upon returning to live with her married daughter—in a three-room tenement occupied by the daughter, the son-in-law, and two small children. I inquired of the daughter if there had been no professional attendance during the four months of her mother's life in the home. She answered, "No." I asked if anyone had been to look after her mother since her return from the sanatorium. She said that the Board of Health nurse came at irregular intervals but she did no good but rather made trouble. She said the nurse took the temperature, scolded the family for not keeping the windows open, and was generally unpleasant. I inquired if the nurse did nothing to make the mother comfortable. She said, "No. She never turned her hand to anything." Probably this nurse was acting according to her instructions and had not time for bedside care, but if on occasional visits she had made the patient comfortable in the many ways known to nurses, her influence with that family and the neighbors would have been of great value. Our experience has amply demonstrated that the nurse who has actually rendered nursing care in a family is able to induce patients to consent to proper treatment much more readily than the Board of Health nurse whose only function is to see that the health rules are enforced. Thus the visiting nurse can advise and lead the people with whom she comes in contact to make use of the co-ordinating agencies where otherwise, through fear or ignorance, such treatment would be refused. This is especially true in dealing with mothers whose children need institutional care.

As a general plan of organization, each community should be divided into nursing districts. One or more nurses should be assigned to

regular duty in each district, and the basic work of such nurses should be to attend the sick. If possible, I would have a settlement house in each nursing district, in which one of the residents should be a nurse of the district. In addition to the nurses assigned to districts, there should be a sort of flying squadron to supplement where the work grows pressing, to fill vacancies caused by sickness or absence, and to do special work under the direction of the superintendent. The nurse is a field agent of the cooperating organizations. When a visiting nurse discovers the need for the use of a co-ordinating agency, she should report the fact to the superintendent and, under the instructions of the superintendent, should endeavor to persuade the family, if their consent is required, to submit to proper assistance, and she should make it as easy as possible for the patient by making all preliminary arrangements and showing the way. If by reason of school inspection it is apparent that a child needs operation, a nurse familiar with the family should be the persuasive medium; and I believe that the city should employ the visiting nurse association to do this work rather than to send a city nurse unfamiliar with the family and whose influence is, therefore, very slight.

The cooperation of agencies may grow, in the manner I have endeavored to describe, but if agencies already exist as separate and non-affiliated organizations, a general committee consisting of representatives of each organization could be chosen and, upon their advice, methods of work adopted which would save duplication of effort, and prescribe ways by which one agency could easily make use of the facilities of another. When questions arise between agencies because of alleged trespasses on particular cases, this clearing house committee should have authority to settle the matter for the best interests of all. If community work is to be carried on by reason and not by impulse, it should not be difficult to provide some method of co-ordination, and I believe that the first step in this direction will be the most difficult, because, as the work goes on, the value of co-ordination will become more and more apparent. It would, of course, be desirable to have the headquarters of the different agencies in one building, but this is not always feasible. In any event, much good may be accomplished and no harm done by working in harmony.

DISCUSSION

The Chairman: Mr. Borden's paper shows that under present conditions it is still necessary to have police or health agents, but he makes plain that it is due to a local condition and we hope, a temporary and passing one. It is gratifying to have Mr. Borden introduce the fundamental question of educational equipment of public health nurses (which we did not dare attempt to discuss on this program because it would take too much time) and to note that he believes that the public health nurse is comparatively well prepared, even now, for social service work and is the best possible social as well as health agent because of the solid foundation which the training and discipline of her nursing education have given her. We are deeply indebted to Mr. Borden for his paper and still more for the system of community nursing which it describes so lucidly.

Several years ago there was an overwhelming catastrophe in Ohio. You are all familiar with the newspaper accounts of the flood. While it was terrible at the time, it has resulted in much good to the City of Dayton, where a wonderful new civic spirit was developed almost immediately and a complete revolution in city administration resulted in a commission form of government. Among other things that happened in connection with this program of coordination was the amalgamation of all public health nursing interests under medical direction of the health officer and nurse supervision of the superintendent of the Visiting Nurse Association. The nurses' association now occupies an office on the same floor and in the same building with the Department of Health and the Bureau of Federated Philanthropies. Nurses in many parts of the country watched with the keenest interest the development of this scheme of amalgamation under the supervision of Miss Elizabeth Gordon Fox, who was one of the leaders in the movement; and although she has left Dayton and gone to Washington, it seemed appropriate that the woman who helped to work it out should speak to us. She has also been urged to do so by her successor in Dayton. I now have the pleasure of presenting Miss Fox, of Washington.

COMMUNITY NURSING IN DAYTON, OHIO

ELIZABETH GORDON FOX, B. A., B. N., Washington, D. C.

I would like to begin with a little story that I recently read in the Atlantic Monthly, because I think it is so apropos of this situation. The story is of six very wise blind men who went to see an elephant and when they came away they began to discuss the elephant. One said that the elephant was very like a wall because he felt of his side, and another said he was very like a tree because he got hold of his leg, another said he was like a fan because he had hold of his ear, another

said he was like a spear because he got hold of his tusk, another said he was like a smokestack because he got hold of his trunk and the last one said he was like rope because he had hold of his tail. I wonder if that is not our situation? We are struggling to preserve health, to conserve health; one person thinks that babies and diseases of infants are of the utmost importance, another thinks only of tuberculosis and somebody else is just as sure that we should pay all our attention to school children, and so on. Perhaps we are all taking hold of a different part of the elephant instead of looking at the whole animal.

The term community nursing in its full and ideal sense, should mean a cooperative plan including all forms of nursing, private and public; bed-side or instructive; nursing by the graduate nurse and by the practical nurse and midwife; a plan which should meet the needs of all of the people, rich and poor, young and old, with no discrimination against age, race, occupation, bank account or diagnosis. But this is an ideal which no community has yet been brave enough or far sighted enough to put into operation. The use of the term community nursing in this paper has no such broad interpretation, but is limited to public health nursing exclusively.

In Dayton, a manufacturing town of 120,000 population in southern Ohio, no less a force than Dame Nature herself was responsible for the awakening of community spirit, and regeneration of her civic and social agencies, and through this awakening for the birth of the idea of community nursing.

Some three or four years ago Dayton was a rather conservative town, content to let well enough alone, on the complacent doctrine that what had been done for ten or twenty or thirty years had proved its worth and should not be changed. Then in the spring of 1913 came the mighty flood of the Miami river bringing death and destruction with it. You may remember reading in the Survey of the work of the Red Cross in Dayton following the flood. But true to the old saying, the ill wind brought some good, for the same waters, that wrought so much damage, washed away all the sluggishness, the timidity, the self satisfaction that had anaesthetized the city for so long. Hardly had the waters subsided, and before the city had been dug out of the mud, the new spirit of civic pride, of the common family, the common problem, the common responsibility, and the common welfare filled the air.

The striking evidence of the force with which this new spirit of concerted action for the common good, had gripped the people was the speedy raising by all the people of the three million dollar flood prevention fund to be used in making the Miami Valley safe from future inundations.

When the first shock of the catastrophe had subsided, Dayton set itself seriously to work to translate its change of heart from the realm of the spiritual into that of the actual. It took for its motto "a better and a bigger Dayton," and ruthlessly trampled on any obstacle that stood in the way of this high resolve. Old methods and institutions, if they proved to be stumbling blocks to progress, were eliminated. The entire city submitted to a thorough housecleaning and all the wornout policies and paraphernalia were scrapped. All of the philanthropic agencies followed suit and proceeded to renovate their machinery and methods. During this process came the genesis of the future plan of community nursing.

The citizens of Dayton had begun to think of things in terms of the whole, instead of in terms of the part. They no longer considered only the welfare of their own families, their own street, their own church, their own industries; they had awakened to the realization that the welfare of each and every part of the social fabric was necessary to the welfare of any part.

Applying this theory to the social field they began to see that formerly each social worker had taken a few of the irregular bits of this picture puzzle we call life, and had gone off, each into his own little corner, to try to fit his blocks together. And in each little corner was to be found the same state of affairs, an ardent student, distracted and discouraged by the futility of the attempt to match miscellaneous fragments. The patent conclusion could only be, that if each man would bring his fragments to the common board, and each one, instead of trying to put his own unrelated pieces together, would seek to work his pieces into the whole pattern, lo, there would shortly be no puzzle at all, but a beautiful and complete picture.

It seemed that especially in the matter of public health nursing they were splitting the picture, the family, into individual cases and ages, and classifications of diseases, and in so doing had lost the pattern.

While the city was unifying and centralizing its political life under the City Manager—Commission form of government, as a result of the 1913 election, and was developing a spirited talent for cooperation in its social life, it was but natural that the supporters of the various public health organizations should begin to investigate their administrative policies and to seek ways of securing the same unity of purpose and action among themselves.

There were at that time three organizations interested in the problem of public health nursing. Two of these organizations, the Flower and Fruit Mission, organized in 1903, whose name was at this time changed to the Visiting Nurse Association, doing general visiting nursing and infant welfare work, and the Tuberculosis Society, organized in 1909 and employing one nurse since 1912 to instruct tuberculosis patients, were philanthropic. The third was the Department of Health with four nurses, the first put on duty in the summer of 1913, supervising and instructing all quarantined families. These three sets of nurses, were each attempting to cover the whole city, working independently and with little cooperation.

The installing of the Commission form of government brought the Division of Health of the city under the Department of Welfare, with the Director of Welfare one of the five directors forming the city manager's staff. This rendered its field of operation largely free from political pressure. The Boards of the Visiting Nurse Association and the Tuberculosis Society, strongly imbued with the prevailing spirit of team work, were quick to realize that here was the long desired opportunity to co-ordinate the work of the hitherto isolated groups of public health nurses. Simultaneously the Director of Welfare, Dr. Frank Garland and the Commissioner of Health, Dr. A. O. Light, discovered the fact that the scope of their nursing department could be greatly augmented and widened by incorporating with it the two older well established nursing bodies.

It, therefore, came about that Dr. Garland and Dr. Light, Mrs. Walter Phelps, President of the Visiting Nurse Association, and other representatives of the two philanthropic societies, held a meeting to discuss the wisdom of a coalition, and to frame a working plan. The consensus of opinion was that it was good business from the standpoint of economy of finance, time, efficiency and public approval to unite their divided forces, by bringing the three sets of nurses into a

single staff, in one headquarters under one paid director. The three organizations were to continue their corporate form, and their authority over their respective nurses and services. There was no pooling of the budget at any time, each organization paying its own expenses.

This plan, accordingly, was put into operation, in March, 1914. The Visiting Nurse Association and Tuberculosis Society moved into offices of the Department of Welfare, where were also the rooms of the Division of Health of the Department of Welfare, thus bringing all the nurses into a common office; and in return the superintendent of nurses of the Visiting Nurse Association became the superintendent of the whole staff.

After a six weeks trial it became evident that the plan had not been carried far enough to secure the best results. While the nurses were going out from a common office, there was still the same division of labor, one group doing general nursing, another tuberculosis preventive work, and the third quarantine enforcement, and all three trying to cover the same territory. Again a meeting of the three governing bodies was called, and again it seemed wise to them all to carry the doctrine of unity a step farther, and eliminate the special services. The fact that the car lines all converged toward the center of the city, with no belt lines, meant that the nurses, because of the wide excursion of their boundaries, were spending much time riding to and from the central transfer places. It was felt that smaller districts would obviate this waste of time. It also seemed more normal and simple to treat the family as the unit, rather than the individual, and to send one nurse into the home as nurse, adviser and friend, rather than several. It was argued that this would clear away the confusion in the minds of the people caused by limiting the nurse to certain ages or diseases. When they called the nurse in now, it would always be the right one, and not possibly the wrong one, who might have to waste a half day transferring the case to the right nurse for care. It seemed to promise a more natural and friendly relationship with the family, and a better understanding of the whole situation. For these reasons and several others in May, 1914, the whole city was laid off into a single set of small districts. One nurse only was put in each district, and that nurse combined in her own person, the general nurse, the baby nurse, the tuberculosis nurse, and the

quarantine nurse. The nurses were prepared for this new and more difficult task by a series of lectures on these special branches.

One phase of the work, however, was carefully excepted from the process of merging, and this was the records and statistics. That is to say, very careful records were kept of each branch of the work, in order to insure the maintenance of the proper balance, to prevent the sacrifice of one service to another, and to furnish a basis from which each service could be sure of proportionate growth. A monthly statistical report giving a clear analysis of the work of each service together with a grand total of the whole, made it impossible for any part to be lost sight of. This statistical report together with a descriptive report was made monthly to each governing body by the superintendent of nurses. That this involved much labor, time and supervision goes without saying but it was absolutely essential. An Advisory Council composed of directors of each organization met on call to consider this report and the relation of each service to the whole. In this way active consideration of each part, and frequent survey of the whole was secured.

Before this amalgamation took place, the infant welfare work had been done by one nurse who tried to cover the whole city, to attend the baby clinics, and to supervise the preparation of the special milk modifications in the milk kitchen maintained by the Visiting Nurse Association. Manifestly with so inadequate a staff the work could be done only on a small scale. What was done was well done, but it was limited in scope.

After the new plan of generalization went into effect all this was changed. There were now eleven nurses in eleven small districts devoting part of their time to babies, instead of one nurse giving all her time. The supervision of the milk kitchen and the clinics remained in charge of the original baby nurse, who also carried a small district. It was the earnest desire of the Commissioner of Health as well as of the Board of the Visiting Nurse Association to enlarge the range of the infant welfare work, and to cut the baby death rate as promptly as possible.

The first shot fired in this battle was the inauguration of the procedure of visiting the homes of all babies, whose births had been registered with the Division of Health during the year. This proved a speedy means of bringing under observation many babies in need of

medical or nursing attention. This plan, together with the fact that each nurse, because of the smaller confines of her district, was able to cover it thoroughly in the search for babies, resulted in a marked increase in the enrollment of babies under nursing supervision.

The three clinics held weekly under three public spirited doctors, and the Visiting Nurse Association soon proved utterly inadequate to meet the greatly increased demands of the baby work. The central milk station was also found to be out of reach of many of the mothers, who lived at any distance from the center of the city.

To meet this new development the Commissioner of Health and the Board of the Visiting Nurse Association made an arrangement by which a clinic for babies was opened in school houses in four different parts of the city. Four of the city doctors were in attendance at these morning clinics twice weekly and the nurses in whose districts the schools were located, were in daily attendance. To these clinics came many mothers with their babies, who could not get to the central clinic. In those cases where the doctor ordered a formula prepared in the milk station, the modification was done at the one milk kitchen and was delivered to the school each morning by one of the sanitary officers. This use of the sanitary officers as milk men would have been unattainable had it not been for our close relation with the Division of Health. Thus many formulae were prepared and carried to the schools, and many mothers were taught to do the modifications at home, and when necessary milk was provided free or at less than cost from a special milk fund. We had not at this time been fully convinced that it was better to eliminate the station modifications and teach all the mothers in their homes. All this time the nurses were visiting the homes of the babies, teaching hygiene and proper care and giving nursing to those who needed it. In some cases as many as three visits a day were made to the very ill babies. As the nurses had small districts it was possible to keep very close watch over the babies, and few were lost sight of through failure of the mother to report at clinic.

A well patronized baby contest was held in the summer of 1914 under the supervision of the Health Department at which the babies were weighed, measured, tested and examined according to the most approved plan. Much advice and literature was given the mothers by the doctors at this time, and any defective babies were put on the nurses' visiting lists for follow up work.

Careful records were kept of the home work, the clinic work and the distribution of milk, and it was with gratification that the rapid increase both in the numbers under supervision and the amount of care given was noted. Recalcitrant mothers, when all other means had been exhausted, were brought into line through the assistance of the Humane Society and the Associated Charities, and the hospitals were most generous in receiving all cases recommended by the doctors for hospital care. The most convincing testimony of the successful achievement of the object toward which all these efforts were directed, lay in the fact that the infant mortality rate for the four summer months dropped from 133 in 1913 to 85 in 1914, and to 52 in 1915.

At the same time this satisfactory development of the baby work was taking place a similar growth was being registered in the other services. The tuberculosis work had nearly doubled in amount, the maternity service had shown large increase, all of the typhoid cases reported by the doctors to the Division of Health were being kept under supervision, and many of them were receiving nursing care. The same faithful service was being given to the chronics, those poor unfortunates whose only friend seems to be the visiting nurse.

Much skill was needed in planning the districts to make it possible for each nurse to accomplish her day's work to the best advantage of all her patients and her varied duties. When clinics conflicted with the needs of sick patients relief had to be given the nurse, that neither clinic or patient might be neglected. Again when an unusual amount of sickness prevailed in a nurse's district, relief had to be granted to prevent the slighting of the purely instructive work. Close supervision was necessary to keep the balance true.

It might be well in passing to note that this affiliation with one of the city departments was a tremendous help in eliminating the charity stigma, from which we are all trying to escape. The nurses visited all homes regardless of social or financial standing where there was contagious disease, tuberculosis or a certified birth as the paid agent of the Health Department. The public quickly ceased to associate them with the care of the poor exclusively, and many doors of homes above the poverty line were opened to them, which had never been open before. In this natural and logical way a long desired object was secured:

Advocates of the specialization plan of nursing have many arguments to sustain their convictions, and the supporters of each specialty prophesy the demoralization of their particular cause as soon as it is merged into the general plan. Therefore, this experiment in generalization in Dayton was watched with keen interest. From the first, the governing bodies of the organizations involved felt that the plan was proving its success, but wished it given a fair trial before judgment was passed one way or the other. However, after some months had passed, certain outstanding facts gave them the right to say that for Dayton, at least, this was much more effective than the old plan of specialization. The work had received a big impetus, was becoming more widely known among all classes, was being used more extensively and occupying a more prominent position in the civic and social life of the city. There was more frequent and more intelligent cooperation with other agencies, more business-like administration, and a degree of efficiency never reached under the old plan. And above all other facts, stood the undeniable record of increase and improvement in each one of the services.

Those who witnessed this evolution of community nursing in Dayton and followed it to its permanent establishment as a success are its ardent advocates. That it could not have been done at all without the wise forbearance, the fair understanding of all sides, the hearty support and sympathy of Mrs. Phelps, Dr. Garland, Dr. Light and all the members of the governing bodies, is evident enough. That some such plan of community cooperation would be more effective in our towns than the present method of scattered forces is their firm conviction. That such a plan could be put into practical operation in the large cities they are not prepared to say. They are also willing to concede the point that unless certain factors, to wit—freedom from political control, the spirit of the square deal and the genuine desire of the directors to work together unselfishly for the common good were present this plan would not be practical even in lesser cities. But given these few necessary factors it seems unreasonable to assert that the same success obtained in Dayton would not follow the inauguration of this plan in other towns and those who have seen its working out in Dayton are confident that it is worthy serious consideration and an honest trial.

The Chairman: While Miss Fox modestly emphasizes the peculiarly favorable conditions which have made this experiment possible, it is altogether reasonable to say that both the experiment and her paper are contributions of great and permanent value to the cause of public health nursing. It should be stated that after this plan had been well launched and fairly tested, *one* lone school nurse was appointed by the Board of Education, which refused to co-operate with the Central Committee, but the general public health nurses follow-up contagious cases among school children and at present are visiting *all absentees* in an effort to stamp out a diphtheria epidemic. It is sometimes possible to prove a point by negative evidence.

May the Chair make an announcement that is of interest in this connection? Quite recently in Dayton, at the solicitation of several prominent manufacturers, an impromptu meeting of the Visiting Nurses' Association, the Board of Health, the Federation of Philanthropies, and other interested persons was called, which resulted in a resolution to ask the Manufacturers' Association of the city to join with the Federation in a plan to put industrial nursing under the direction of the Central Committee on Public Health Nursing. This is regarded by those best acquainted with the development of this splendidly coordinated work as a most timely evidence of respect for and confidence in it on the part of some of Dayton's most critical as well as most respected citizens.

When the Committee began to consider suitable persons to discuss these papers, the first one to whom their minds naturally reverted was Dr. H. J. Gerstenberger, of the Babies' Dispensary and Hospital, of Cleveland. Dr. Gerstenberger will open the discussion.

Dr. H. J. Gerstenberger, Cleveland: I have before me a manuscript which is to appear in this month's number of the Cleveland Medical Journal, and which represents a description and the results of a personal investigation into the pros and cons of the subject under discussion this morning.

I think I shall present my views and convictions best by reading you paragraphs from the just mentioned article. The tables which I have before me, from which the statistical deductions were made, are too many and too small to enable me to present them to you here. I, therefore, must refer all of you who are interested to the November number of the Cleveland Medical Journal, where you will find the same reproduced in total.*

Before going ahead with the article, I wish to make one point, namely, that I doubt very very much whether one can depend upon the statistics compiled from data collected through circular letters or questionnaires. In most instances, one has no idea whatsoever as to the ability, knowledge, experience and judgment of the individual answering the questionnaire. Therefore, I feel that such statistics are of no value.

* This article is printed in a medical journal to impress once again upon the minds of medical men—both in practice and in medical schools—the great need of their serious attention to the proper development of their profession, in order that it might meet its obligation and opportunity in public health work and social medicine. A continuance of the general apathy of medical men to this field of medicine is bound to bring harm both to the profession and the public.

THE QUESTION OF SMALLER NURSING DISTRICTS FOR ALL KINDS OF PUBLIC HEALTH WORK, VERSUS LARGER DISTRICTS FOR SPECIALIZED WORK*

H. J. GERSTENBERGER, M. D., Cleveland

This important and vital question is at present, throughout the entire country, actively engaging the minds of many individuals interested in public health work—physicians, nurses, social workers and laymen. It is not, however, as many seem to think, a brand new idea which has just appeared recently. I recall distinctly an interesting discussion which I had during 1909 in Charlottenburg, with Dr. Orgler. It referred to the same subject, and Orgler stood for the smaller district. In the winter of 1910-1911, Mrs. James Garfield presented the same subject to me, and in the same manner, and I suppose there are many others who have had the same experience so long ago.

Before entering into the discussion of the subject of this paper, I wish to make the following statements:

(1) What we all must desire to accomplish is the adoption of the plan, whichever it may now or ultimately be, which will bring the best results, not simply to the individual, be he physician, nurse, patient, social worker, or layman, but to the whole community, city, state and nation.

(2) In deciding how to get the best results we must not forget that the first requisite is knowledge of the subject to be handled, and the second, thoroughness and common sense in applying this knowledge.

(3) The best results should not simply mean good feeling among the workers and patients, although, of course, harmony between patient and worker is of extreme importance, but rather the statistical proof by thorough and competent individuals that the morbidity, mortality, and all that both of these terms imply, are lessened to the greatest possible degree; or better stated, that in its broadest sense the health of the nation has been preserved to the highest degree. I emphasize the need of properly prepared statistics because of the fact that by far the great majority of those prepared in this country are worth absolutely nothing.

* Cleveland Medical Journal, November, 1915

(4) I personally have believed for many years that the best results in public health and social medical work can be obtained by placing, practically speaking, all of the work of a district in the hands of one home worker, and by having the district small enough to enable the one worker to really care for the affairs of the district—*providing these district workers are directed and supervised by individuals who on the basis of knowledge and with thoroughness and common sense, can direct and supervise, namely, properly trained physicians.*

The present war has done much and will do still more in making many of us Americans realize the fundamental need of thoroughness in gaining and in applying knowledge in every kind of endeavor, and, therefore, I think that many more than formerly will appreciate the real meaning of these terms and will not so carelessly apply the criticism "too scientific, too thorough."

As the discussion of all of the phases of the question under consideration would go far beyond the bounds of a single article, I shall limit it to the consideration of the grounds generally given as sufficient to warrant a change, and also to the advantages and disadvantages which such change would represent to the infant welfare work as it is at present carried out in Cleveland under the joint efforts of the Bureau of Child Hygiene of the Division of Health, The Babies' Dispensary and Hospital, and the Pediatric Department of the Western Reserve Medical School. The discussion of the conclusions to be drawn from it will just as well apply to any other part of public health work for the simple reason that all different departments could have the same organization if they wished it and could do the work.

At the present moment the City of Cleveland is divided into fifteen districts for its infant welfare work. In each of these districts there is a dispensary of the Bureau of Child Hygiene, in charge of a physician and one to three nurses. Any parents can bring their infants to the Dispensary for advice in the care and feeding of their child, providing that it is well. If it is sick and the parents cannot afford the services of a private physician, the baby is sent to the Central Dispensary of the Babies' Dispensary and Hospital, a philanthropic institution which cares only for sick infants of needy parents. When an infant has recovered its health, it is again transferred to the

Prophylactic Dispensary from which it originally was referred to the Sick Dispensary.

From the following diagrams the organization of the infant welfare work carried out jointly by the three above mentioned institutions can be ascertained.

Diagram I

Showing department heads of staff organization of Babies' Dispensary and Hospital, Bureau of Child Hygiene of the Division of Health and Department of Pediatrics of Western Reserve University.

<i>Babies' Dispensary and Hospital</i>	<i>Bureau of Child Hygiene of Division of Health</i>	<i>Department of Ped- iatrics of Western Reserve University</i>
A. Medical Director.	A. Consulting Direc- tor.	A. Professor of of Pediatrics.
B. Physician in Charge of Cen- tral Dispensary.	C. Director.	B. Associate in Ped- iatrics.
E. Superintendent of Nurses.	E. Superintendent of Nurses.	C. Instructor in Pediatrics
D. Assistant Physi- cian in Charge of Central Dispens- ary.		D. Instructor in Pediatrics

Diagram II

Present activities of Babies' Dispensary and Hospital, Bureau of Child Hygiene of the Division of Health, and Department of Pediatrics of Western Reserve University, cooperating in the reduction of infant mortality in Cleveland.

*Babies' Dispensary
and Hospital*

(Medical Director)
Central dispensary
for ill infants and
young children.
Central milk labora-
tory supplying
needs of Babies'
Dispensary and
Bureau of Child
Hygiene.
Massage and electri-
cal treatment de-
partment.
Radiographic Depart-
ment.
Training of medical
students by prac-
tical experience
with ill infants.
Training of medical
students in milk
laboratory.
Training of nurses of
Bureau of Child
Hygiene and of
special classes.
Post-graduate course
for nurses.
*Teaching of infant
hygiene in public
schools.
Popular educational
lectures.
Out-Door Ward
during summer
months.
Wet-nurse bureau.
Sewing-classes for
mothers (Prophy-
lactic Babies' Dis-
pensaries, Depart-
ment of Child Hy-
giene).

*Bureau of Child
Hygiene
Division of Health*

(Consulting Director
of the Bureau of
Child Hygiene).

Fifteen Prophylactic
Babies' Dispensar-
ies.

Two nurses for oph-
thalmia neonator-
um work.

One nurse for control
of neglected eye
cases of older chil-
dren and adults.

Boarding home sys-
tem—one child per
home.

Use of Prophylactic
Babies' Dispensar-
ies and of ophthal-
mia neonatorum
material for teach-
ing medical stu-
dents and nurses.

Use of Prophylactic
Babies' Dispensar-
ies for mothers'
sewing-classes in
conjunction with
Babies' Dispensary
and Hospital.

*Western Reserve
University*

(Professor of Pedia-
trics)

Training of medical
students in dis-
eases of infants,
especially nutri-
tional disturbances,
infant feeding, pre-
paration of various
foods at milk lab-
oratory of Babies'
Dispensary and
Hospital; general
aspect of infant
mortality work,
and special parts
of it by practical
experience in ma-
chinery of Babies'
Dispensary and
Hospital and Bu-
reau of Child Hy-
giene, Division of
Health.

*Transferred to Med-
ical Inspection of
the Public Schools
(in regular curri-
culum).

As a result of this organization it has been possible to have:

- (1) All three institutions work together as one.
- (2) All Bureau of Child Hygiene nurses spend three months in special training in the dispensaries and in the district with the educational nurse of The Babies' Dispensary and Hospital.
- (3) All physicians in charge of the Prophylactic Dispensaries of the Bureau of Child Hygiene spend at least twelve months of regular daily attendance at the Central Dispensary of The Babies' Dispensary and Hospital, under the supervision and guidance of men well trained in Pediatrics. Until now all of these men have been full-time men.

In order to stimulate and improve the physicians and nurses engaged in any part of the entire work, they are supervised by physicians and nurses having greater experience and training than their own. In order to also have these supervisors properly trained and alert to the advances that are being made throughout the world, it is planned to make them an active part of a University organization. As far as the medical supervisors are concerned, this is an established fact.

- (4) The Senior Medical students of Western Reserve University receive compulsory training both at the Central Dispensary for sick infants as well as in the Milk Laboratory and in the social-medical work of the Prophylactic Dispensaries.

The last three of these activities are based upon the conviction that the first requisite in doing infant welfare work is knowledge of the subject, and that this can only be gotten by thorough work for a minimum length of time.

- (5) Regular meetings between the heads of the different divisions in order to discuss flaws and problems and to improve and enlarge the usefulness of the work. These meetings are held once each month.

- (6) Each nurse cares for all of the patients in her district, both when well and sick.

- (7) A uniformity in the manner in which the physicians care for the routine of each Dispensary. This is due to the requirement stated above, that all men spend at least twelve months at the Central Dispensary before becoming eligible for physicianship at the Prophylactic Dispensary. This uniformity in system makes the nurses' work much easier and enhances the understanding and cooperation between physician and nurse.

(8) Centralization of authority for entire work.

In other words, this organization is in a position to have:

- (a) Knowledge of the subject.
 - (b) Thoroughness and uniformity in applying this knowledge.
 - (c) Harmony and permanency, and
 - (d) A direct connection with the highest educational factor in the community, the University.
-

The main arguments advanced by those wishing a change from the present system are as follows: The placing of one nurse in a small district to do all of the public health work therein will:

(1) Make it impossible to make the homes of these families "a highway for social workers" and will also lessen the excessive number of visits made or supposed to be made in many of these homes.

(2) Save much valuable time by preventing the retracking of the same ground by workers from different departments and associations. It will also save time by making the distances which the individual nurse must travel, much shorter.

(3) Better enable the nurse to get the confidence of the families, because she will be in a better position to know all of the sides of the individual family's existence.

(4) Give to the poor patient what we consider best for ourselves—one advisor.

(5) Make a uniform scheme of public health nursing for country, village, small city, and large city. The fact that the rural nurse does all different kinds of work and that she seems to get along just as the country physician does, is also used as an argument for the feasibility of this plan.

Answer to Argument 1: Although I have always believed that some of the families visited by our different organizations were annoyed and distressed by a large number of different agencies visiting them, I have never felt that the number of families molested in this manner was very great—surely not as great a number as many seem to believe. In order, however, to be able to get at the real situation, I decided to make a statistical study of a sufficiently large number of patients to permit me to draw definite conclusions.

For this study 1,406 charts of infants and young children coming either to the Central Dispensary of the Babies' Dispensary and Hos-

pital (for the sick), or to the Prophylactic Dispensaries of the Bureau of Child Hygiene (for the well) were taken, in order of their admittance, beginning with January 1, 1915. Nine hundred and six of these, chosen equally from the 15 individual Prophylactic Dispensaries, were so-called "prophylactic" cases, while 500 were so-called "sick" cases. Of the 906 Prophylactic charts 88 were duplicates, having also been entered at the dispensary for sick children, leaving 818 Prophylactic charts for study, and together with the 500 sick, a total of 1,318.

The months studied were January, February, March, April, May and June, 1915.

The names of all of the "prophylactic" cases were given to the Charities Clearing House, which institution was kind enough to investigate each individual name and send a list of the different organizations who, according to its records, had been at some time or other interested in that family. It was not necessary to submit the names of the patients entered at the Central—Sick Dispensary—because the records of these cases already contained the data obtained from the Charities Clearing House.

So what I wished now to determine among the families of the 818 babies coming to the Prophylactic Babies' Dispensaries of the Bureau of Child Hygiene and the 500 coming to the Central Dispensary of the Babies' Dispensary and Hospital was the degree of over-visiting, of making the homes of these families a "highway" for agents of different organizations. I, therefore, wished the statistics to answer the following questions:

(1) How many and what per cent of the total number of families of babies coming to the Prophylactic and Central Dispensaries have been visited by one, two, three, four, five, etc., different organizations during the same month?

(2) How many and what per cent of the total number of families visited in the given month have received a total of one, two, three, four, five, etc., visits during that same month?

(3) What per cent of the total number of families visited in the given month were visited by the different individual organizations?

(4) What is the relative position of the various organizations interested in these families, as to the number of families visited and as to the per cent of the families visited by them all during the given month?

(5) Is there any difference in "the degree of over-visiting" between the families of the prophylactic babies and those of the sick babies?

From tables I-a and I-b we learn:

- A—that from 86.85 to 94.52 per cent of all of the "prophylactic families" and from 79.04 to 89.29 per cent of all of the "sick families" visited by one or more of the different organizations were visited by only one organization during a given month.
- B—that from 5.08 to 11.42 per cent of all the "prophylactic families" and from 9.22 to 17.66 per cent of all of the "sick families" visited by one or more of the different organizations were visited by only two organizations during a given month.
- C—that from 0.21 to 1.71 per cent of all the "prophylactic families" and from 1.29 to 3.29 of all of the "sick families" visited by one or more of the different organizations were visited by only three organizations during a given month.
- D—that from 0.21 to 0.23 per cent of all the "prophylactic families" and from 0.25 to 0.46 per cent of all the "sick families" visited by one or more of the different organizations were visited by only four organizations during a given month.
- E—that the per cent of families visited in the individual months by one organization is higher among the "prophylactic cases" than among the "sick cases."
- F—that in both "sick" and "prophylactic" cases the per cent of families visited by one organization is higher toward the summer months and lower toward the winter months.

From tables II-a and II-b we learn:

- A—that from 45.71 to 62.04 per cent of all the "prophylactic" and from 35.62 to 54.47 per cent of all of the "sick babies' families" received but one visit during a given month.
- B—that from 18.97 to 26.28 per cent of all of the "prophylactic" and from 19.48 to 28.57 per cent of all of the "sick babies' families" received a total of two visits during a given month.
- C—that from 7.29 to 16.57 per cent of all of the "prophylactic" and from 8.48 to 17.17 per cent of all of the "sick babies' families" received a total of three visits during a given month.
- D—that from 2.57 to 6.04 per cent of all of the "prophylactic" and from 4.20 to 8.71 per cent of all of the "sick babies' families" received a total of four visits during a given month.
- E—that from 71.99 to 82.92 per cent of all of the "prophylactic" and from 62.86 to 76.48 per cent of all of the "sick babies' families" received a total of either one or two visits during a given month.
- F—that from 88.80 to 92.54 per cent of all the "prophylactic" and from 74.59 to 86.18 per cent of all of the "sick babies' families" received a total of either one, two or three visits during a given month.
- G—that from 93.38 to 96.04 per cent of all of the "prophylactic" and from 83.80 to 91.86 per cent of all of the "sick babies' families" received a total of either one, two, three or four visits during a given month.
- H—that the per cent of "prophylactic" babies' families receiving a total of one, two, three or four calls within one month from an individual

or a number of organizations is greater by about five to ten per cent than the per cent of "sick" babies' families visited in the same manner.

- I—that the number of families receiving a total of more than ten visits within one month is less than 1 per cent.

From tables III-a and III-b we learn:

- A—that of the total per cent of from 17.95 to 26.28 per cent of the "prophylactic" babies' families receiving a total of two visits per month, 16.42 to 20.57 per cent received these visits from one organization, and 1.53 to 5.71 per cent received these visits from two organizations; and that of the total per cent of from 18.20 to 30.93 per cent of the "sick" babies' families receiving a total of two visits per month 16.41 to 25.34 per cent received these visits from one organization, and 1.79 to 5.59 per cent received these visits from two organizations.
- B—that of the total per cent of from 6.22 to 16.56 per cent of the "prophylactic" babies' families receiving a total of three visits per month, 5.10 to 12.57 per cent received the three visits from one organization, and .87 to 2.85 per cent received the three visits from two organizations, and 0.25 to 1.14 per cent received the three visits from three organizations; and that of the total of from 8.44 to 17.32 per cent of the "sick" babies' families receiving a total of three visits per month, 7.83 to 12.56 per cent received the three visits from one organization, 0.36 to 4.3 per cent received the three visits from two organizations, and 0.25 to 0.46 per cent received the three visits from three organizations.
- C—that of the total per cent of from 2.63 to 6.57 per cent of the "prophylactic" babies' families receiving a total of four visits per month, 1.4 to 4.39 per cent received four visits from one organization, 1.02 to 1.82 per cent received the four visits from two organizations, 0.21 to 0.36 per cent received four visits from three organizations, and that of the total of from 3.12 to 9.27 per cent of the "sick" babies' families receiving a total of four visits per month, 2.23 to 6.15 per cent received the four visits from one organization, 0.64 to 2.76 per cent received the four visits from two organizations, and 0.25 to 0.36 per cent received the four visits from three organizations.
- D—that the per cent of the "prophylactic" babies' families receiving a total of 1, 2, 3 or 4 visits per month from one organization is somewhat greater than the per cent of the "sick" babies' families receiving the same number of calls from one organization.

From tables IV-a and IV-b we learn:

- A—that the Babies' Dispensary and Hospital and the Bureau of Child Hygiene of the Division of Health visited from 70.28 to 96.06 per cent of the total number of "prophylactic" babies' families visited and from 78.80 to 97.41 per cent of the total number of "sick" babies' families visited in one given month.
- B—that the Associated Charities visited from 5.9 to 25.71 per cent of the total number of "prophylactic" babies' families visited and 13.43 to 27.64 per cent of the total number of "sick" babies' families visited in one given month.
- C—that the Outdoor Relief Department of the City visited from 0.43 to 8.57 per cent of the total number of "prophylactic" babies' families visited and 0.74 to 5.99 per cent of the total number of "sick" babies' families visited in one given month.

- D—that the Bureau of Tuberculosis of the Division of Health visited from 0.76 to 2.55 per cent of the total number of “prophylactic” babies’ families visited, and from 2.91 to 5.59 per cent of the total number of “sick” babies’ families visited in one given month.
- E—that the Visiting Nurses’ Association visited from 1.09 to 2.85 per cent of the total number of “prophylactic” babies’ families visited, and from 0.37 to 1.49 per cent of the total number of “sick” babies’ families visited.
- F—that the per cent of cases in which the Babies’ Dispensary and Hospital and the Bureau of Child Hygiene of the Division of Health were the sole institutions interested in any one month was decidedly higher than the per cent of cases visited by any other one organization.
- G—that this per cent increased with the approach of summer and decreased during the winter months.
- H—that the Associated Charities rank second in the per cent of cases visited by any one of the organizations.
- I—that this per cent of cases in which the Associated Charities was interested was highest during the winter months and lowest toward the approach of summer.
- J—that the Outdoor Relief Department of the City ranks third in the per cent of cases visited by any one of the organizations, the Bureau of Tuberculosis of the Division of Health fourth, and the Visiting Nurses’ Association fifth.
- K—that the two associations whose main reason for coming into the homes of both the “prophylactic” babies’ families and the “sick” babies’ families was to give material relief made a much higher per cent of visits to the homes of our patients within a given month than the two other institutions did who employ visiting nurses—the Bureau of Tuberculosis of the Division of Health and the Visiting Nurses’ Association.
- L—that the Associated Charities visited in a higher per cent the homes of the “sick” babies’ families than it did the homes of the “prophylactic” babies’ families.
- M—that the Bureau of Tuberculosis of the Division of Health to a greater degree visited more of the “sick” babies’ families than the “prophylactic” babies’ families.

The deductions which I believe must be made from the above statistics are as follows:

- 1—that the so-called “overvisiting” of the homes of the “prophylactic” babies’ families and of the “sick” babies’ families exists in such a very small degree as to be entirely negligible:—
 - (a) from 86.85 to 94.52 per cent of the “prophylactic” babies’ families visited and from 79.04 to 89.29 per cent of the “sick” babies’ families visited receiving visits from but one organization during one month,
 - (b) from 93.38 to 96.04 per cent of the “prophylactic” babies’ families visited and from 83.30 to 91.36 per cent of the “sick” babies’ families visited receiving a total of either one, two, three or four visits during one month,
 - (c) less than one per cent of either “prophylactic” or “sick” babies’ families visited receiving more than ten visits during one month.
- 2—that in all instances, except one—see chart IV-A and IV-B January, Outdoor Relief Department—the per cent of families receiving but one visit per month

is from five to ten per cent greater in the case of the "prophylactic" babies' families than in the case of the "sick" babies' families.

- 3—that next to the Babies' Dispensary and Hospital and the Bureau of Child Hygiene of the Division of Health the organizations engaged in giving material relief visited the greatest number of both "prophylactic" babies' families and "sick" babies' families, and not the organizations extensively using visiting nurses.
- 4—that by far the greatest per cent of the various total number of visits made to the families of both the "prophylactic" babies and of the "sick" babies were made by one organization.
- 5—in short, that Argument I which represents the most emphatic contention of those who would change the present system of infant welfare work falls out of practical consideration.

Answer to Argument II. There is no doubt in my mind that were it possible to place one nurse in a district she would have much more time to spend doing actual nursing work, especially if her district happens to be in a less thickly populated territory. All of us engaged in infant welfare work know that the number of cases visited regularly by our different nurses depends to a big degree upon the density and also upon the size of the individual district.

However, this advantage cannot offset the inferiority of the work that nurses will do in such districts if they are not supervised and directed by properly trained full-time medical men.

Answer to Argument III. I believe that this argument also holds; although this does not mean that it will be impossible for a "specialized" nurse to gain the confidence of her families, even if other agents and nurses have preceded her. Nevertheless, the number of individuals among doctors, nurses, social workers and laymen who have an especial ability in gaining the confidence of their charges is not large, and, therefore, everything that will help in the fulfillment of this important object is not to be ignored.

However, this advantage also cannot offset the inferiority in work just mentioned under Argument II.

Answer to Argument IV. This argument, it seems to me, falls of its own accord, for there is no doubt of the fact that the best work on the whole is done by those who concentrate upon one subject; in other words, by those who specialize. What we all wish is the best advice rather than the one advisor. The best practical proof of the truth of this statement is the fact that the following get the advice of specialists whenever they can:

- 1—the well-to-do, because they want the best that money can give them.
- 2—the medical men, because they know how to obtain the best medical advice and what the best medical advice is.
- 3—the Jewish race, because as is well known they are more alert and interested in the intelligent care of their family members than any other race.

Answer to Argument V. It surely would be an advantage to have one scheme for country, village, small city and large city, but to use the fact that the rural nurse and the country physician do all of the various kinds of work in their home territories does not prove that this is the best method and that their work is as good as it can be. The statement made under the answer to Argument IV applies and answers here equally well.

The rural nurses and the country physicians surely do their best and often surprise us with their accomplishments, but to say that they are giving the patients the best care and advice that they can get is as no one knows and realizes better than the country physician himself, far from the truth.

Arguments Against a Change from the Present System

Argument I. The establishment of small nursing districts for all kinds of public health work, not in charge of a competent, properly trained and supervised, full-time physician will make it impossible to have in public health work:

(a) the basis of the entire work—knowledge of the subject and centralization of authority and responsibility—in the hands of the only individual who by training and experience can direct and lead this work, the properly trained and supervised full-time physician.

To place the direction of such a district in the hands of one nurse, be she ever so well trained, or in the hands of a social-worker, or in the hands of a physician who has just recently graduated from a medical school, or in the hands of medical men who have been a failure in the practice of medicine, would be a fatal mistake. Further remarks pertaining to this argument are unnecessary. Its truth is clear and evident.

Argument II. The main argument advanced by those who would change the present system, namely, that the families are being over-visited, falls away because, as was shown in the discussion of the statistical tables given above, this over-visiting does not exist except

in so small a degree as to make it no factor in making or determining a final decision.

Argument III. The advantages to be gained by saving time are not to be considered when the basis of the whole work is at the same time overlooked—knowledge of the subject and centralized authority and responsibility.

Argument IV. All progress in every human endeavor is the result of concentration upon one subject; in other words, specialization.

Summary of Discussion So Far Presented

1. The data submitted above prove that the so-called over-visiting is so small in extent that it falls away as an argument for changing the present system.

2. The adoption of a scheme which would enable the placing of one nurse in a small district for all kinds of public health work would undoubtedly save time which is valuable.

3. The adoption of a scheme which would enable the placing of one nurse in a small district for all kinds of public health work without having a competent, full-time physician as the absolute head would make intelligent, thorough work impossible and would, to my mind, far outweigh the advantages to be derived from the saving of valuable time.

4. Unless a scheme, an ideal scheme, as the one described on pages 329-332 can be established, it will be a mistake to change from the present system which does make possible the following:

- (a) Knowledge of the subject,
- (b) Thoroughness and uniformity in applying this knowledge,
- (c) Centralized authority and responsibility in individuals who have knowledge.
- (d) Harmony and permanency, and
- (e) A direct connection with the highest educational factor in the community, the University.

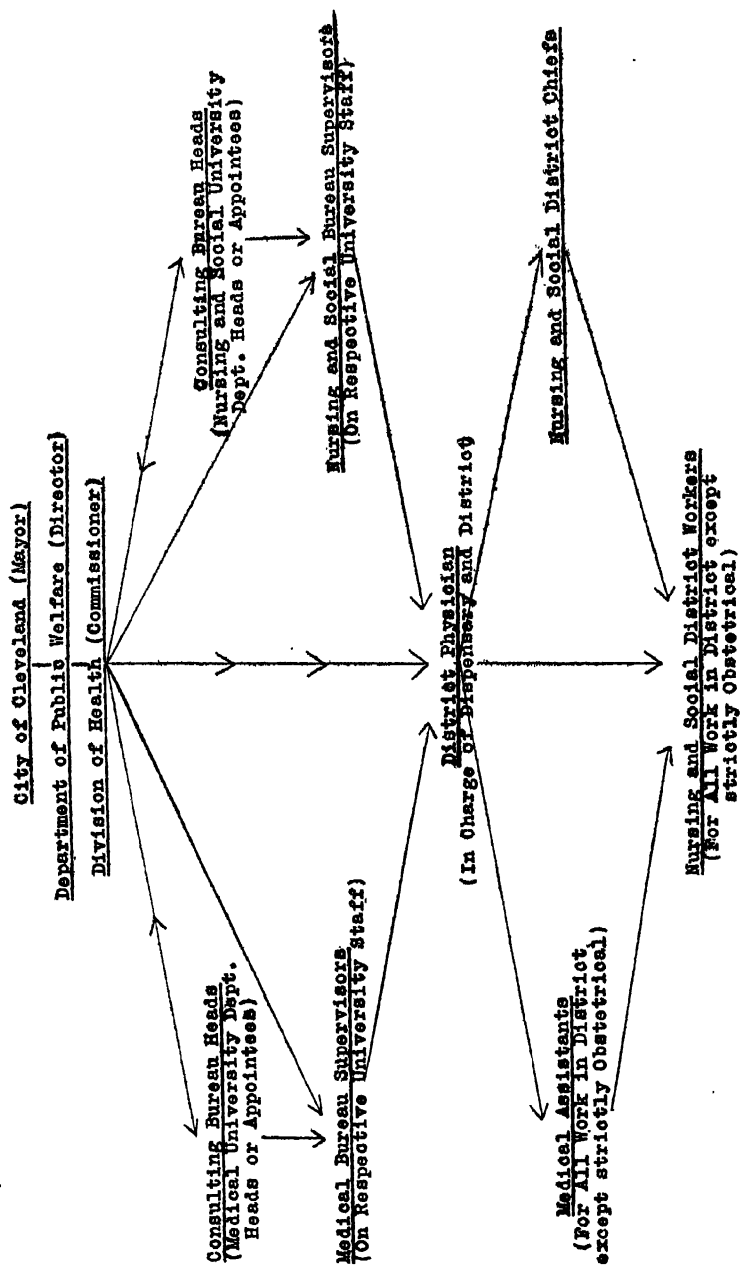


CHART 1.

The Ideal Scheme

The ideal scheme, it seems to me, would be a combination of the one at present existing and the other proposed by the opponents of the present scheme, to which is added full-time employment of properly trained and supervised medical men.

In the following scheme, which is diagramed in charts 1 and 2, I have outlined an organization that in my estimation will be able to meet the requirements as stated in paragraphs 1-4 on pages 315 and 316.

This plan would have as its fundamental characteristics the following:

- (1) The centralization of authority in the hands of one individual—the properly trained and supervised district physician. (See Charts 1 and 2.)

In order to be worthy of holding a position of such authority and importance, the district physician would have to be a man of intelligence and thoroughness, who has had an adequate medical and social training. In order to attract men with the necessary ability and with the desire to devote their lives to this field of human endeavor, it would be necessary to put this position on the full-time, civil service, pension basis. Before entering upon such a full-time district physicianship, it would be necessary, both for the welfare of the physician himself as well as for the work, to have him pass through an apprenticeship of about three years as an assistant to a full-time district physician. The time so spent would give him a most valuable training in social-medical work and would, on the one hand, help the man to decide whether he cared to make this his life's work, and on the other hand, give his future employers sufficient knowledge to enable them to decide as to his capabilities and desirability. I am firmly convinced that a medical man of the above description and with his life laid out for him in the above stated manner, would be by far the best suited individual to direct district work. Such a man, by reason of the supervision and encouragement given him by members of the different University department staffs, would be in touch with the progress made in the different fields of medical, nursing and social endeavors, and so would be an able and constant teacher and leader to those under him—physicians, nurses and social workers. Under such a teacher and di-

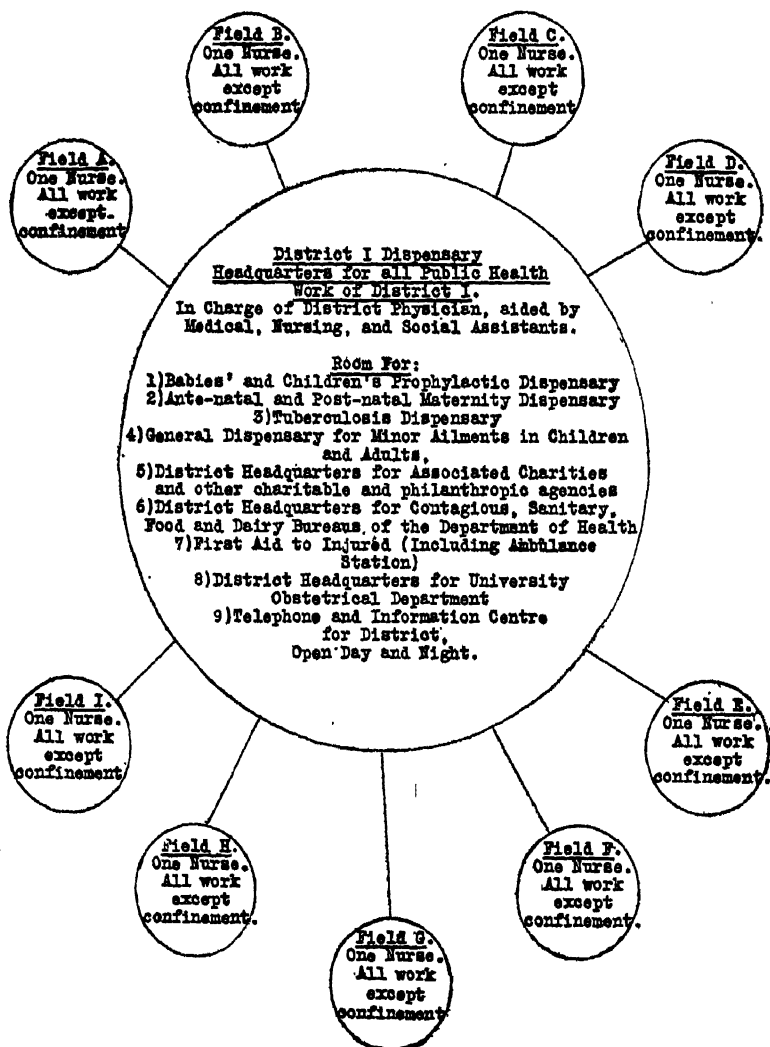
DISTRICT I

CHART 2.

rector, one nurse could do all of the public health work of a district and do it well. Without such direction, the district work by one nurse in a district must needs be distinctly inferior from the standpoint of knowledge and thoroughness.

It is also true that without knowledge and thoroughness it is impossible to judge the results obtained. Most of those who would judge have not knowledge, and many think they know what thoroughness in this work means.

(2) The supervision and constant education of this physician by the heads of the various University departments in medicine, sociology and nursing, or by members of their staffs appointed by them. (See Chart 2.)

I choose the University as the guiding and supervising institution for two reasons:

(a) Because with our present, ever-changing form of government, the University is the only place where we can hope for stability, conservatism, permanency and ideals. This does not mean, of course, that stability, conservatism, permanency and ideals are always found at the University, but in our country they are most likely and most frequently to be found there rather than anywhere else.

(b) Because the University in order to best train men and women for such work needs direct access to the practical public health work.

Such supervision would place at the disposal of the district physician the digest and the advice of experts in the various special fields of medicine, nursing and sociology, and would enable him to become the great general practitioner and advisor that we look for so frequently in vain among medical men, simply because it is impossible for one individual to alone collect the kernels of the work of the various groups. Through this organization the district physician would be enabled to do this to a marked degree.

This scheme would also keep the eyes of those who are training medical men open to their needs.

(3) The placing of one nurse in the home for all work except confinement. This work on account of its great irregularity would have to be done by another staff, namely, the University or municipal obstetrical department. (See Chart 1.)

(4) The bringing together at one place—preferably in conjunction with the public school of the district—and in close contact all of the agencies at work in the district. (See Chart 2.)

(5) The development of public health work on the basis of knowledge, thoroughness, uniformity, harmony, and permanency, together with a maximum saving of time and effort.

The first point, however, to be established in this scheme is not the one nurse in a small district for all kinds of public health work, but the properly trained, competent full-time physician. At the present time this probably can only be done by the establishment of an endowment sufficiently large to insure the permanency of the experiment for at least ten years.

It is not necessary to have an endowment for the entire work. One sufficiently big enough to insure the choice of the proper physician and his retention, after one year's successful trial, for at least ten years, is all that is necessary. The remainder of the equipment can be obtained by having the various organizations working in the district transfer some parts of their staffs in order to make up the complete working outfit.

Conclusion

Until the day comes when some scheme like the one just described can be temporarily or permanently put into operation, it will be better and wiser to stick to the present plan of so-called "specialized" district nursing, rather than to adopt the suggested plan of so-called "generalized" district nursing, because the only apparent and real advantage to be gained by the establishment of the latter, namely, the saving of valuable time, cannot outweigh the advantages inherent in the former, namely:

- (a) Knowledge of the subject.
- (b) Thoroughness and uniformity in applying this knowledge.
- (c) Centralized authority and responsibility in individuals who have knowledge.
- (d) Harmony and permanency, and
- (e) Direct connection with the highest educational factor in the community, the University.

In the case of villages and very small cities, where the funds are only sufficient to employ one worker, and in the case of the country districts where the families are relatively few in number and the distances to be covered very great—the matter of cost alone will be sufficient to make the establishment of the “ideal scheme” or even the scheme of specialized district nursing an Utopian dream. Under such circumstances, we should be glad to have even the least ideal scheme and should consider it a great asset, for it is surely better than nothing at all.

The Chairman: I hope there is no misunderstanding in the minds of those here. I am sure the advocates of general nursing service do not desire nor endorse general medical service. They depend not only on medical specialists but on nurses who have had special training to act as supervisors. They are only arguing for general nurses *in the home*. We are much indebted to Dr. Gerstenberger and shall eagerly await the publication of his paper in full.

We will now hear from Miss Marie Phelan, of Chicago :

GENERALIZATION OR SPECIALIZATION?

MISS MARIE T. PHELAN, R. N., Chicago

When discussing the question of “Generalization or Specialization,” the advocates of generalization seem to lose sight of the broad public health influence which is being taken into the homes by the nurses of the specialized groups.

The infant welfare nurse must be interested in the family, and sanitary and hygienic conditions of the homes, in order that she may create the proper environment for the baby.

It is through her interest and influence that the father is referred to the tuberculosis clinic, and the tuberculosis nurse enters the home, not to duplicate the instruction of the infant welfare nurse, but to give the special instruction which will help to protect the baby and which she can give in a simpler and more convincing manner because of her special training and interest.

Miss Le Lacheur said, “To give sufficient emphasis to the value of any work, the careful attention of a highly specialized service is essential until the value is proved.” If it is necessary to have a highly specialized group to demonstrate the value of the infant welfare work,

is it not just as essential to continue that service in order that the same results may be obtained, and keep the interest of the mothers?

Is not the specialization of the different public health groups, the outgrowth and development of the general visiting nurses work?

Did not these very groups realize the importance of specialization, and were not the pioneer nurses in infant welfare, tuberculosis, school nursing and mental hygiene, taken from these groups because of their special aptitude for these fields?

Why then if the general visiting nurse was capable of doing the work efficiently, have these special groups developed, and become such a powerful influence in the community?

The infant welfare nurse should give nursing care when her babies are sick, and not call in a second nurse. Often it is just at this time that the nurse who has been working for weeks to persuade a mother to feed her baby properly, gains the end she has been striving for, and which she might have lost, if she had not been able to help the mother in this time of need.

From my own experience the question of more than one nurse going into the homes has been greatly over estimated.

Often the question of duplication is the question of cooperation. If we know and understand what the other public health nurses are doing; if the superintendents and supervisors meet for friendly conference, and the members of the staffs know each other personally, there is little fear of overlapping.

When the infant welfare nurse can say to the visiting nurse "I understand Johnny Jones has pneumonia, and you are taking care of him. The baby is one of our babies. Will you let me know when you are through with the case, or if anything goes wrong with the baby, and I will not go in again until I hear from you," there is very little fear of overlapping. This is the plan that is carried out in Chicago.

Last week we made a survey of some of our districts in Chicago. Only twenty-five families out of 597 were being visited by two nurses, and in the majority of these cases, the second nurse was called in by the first nurse. Miss Foley, of the Visiting Nurse Association, found only two families in eighteen districts who were under the supervision of both the infant welfare and visiting nurse.

How many nurses are able physically and mentally to know and understand, and be able to teach every branch of public health nurs-

ing? The personality and adaptability of the woman must be taken into consideration. Unless a nurse is enthusiastic about the line of work she is doing, it is impossible for her to do efficient work.

We cannot all excel along the same lines. There are many women who make excellent tuberculosis nurses, who are not interested in babies; many general visiting nurses have no vision whatever of the possibilities of keeping the well baby well, but who give excellent nursing care to the mother.

The infant welfare nurse must have force, vision, patience, perseverance, tact and above all be not easily discouraged.

Not long ago a nurse with a pleasing personality came on our staff. She was a graduate of one of the smaller hospitals, which gives a good training. Her work so far as nursing technique was concerned was good, but she lacked the faculty of creating between herself and the mothers that personal touch, which cannot be explained, but which you instantly feel, and which a nurse must have to make a successful infant welfare worker.

When we decided she was not adapted for our work we told her we thought she made a mistake in choosing infant welfare work and suggested that she might try some other line of public health nursing and we would do all we could to help her. Within a short time she took up visiting nursing and from all reports is doing very good work.

The question of the nurse stagnating if she specializes too long in one field, depends entirely on the woman. Personally, I think it is a good thing for a nurse after three or four years of work with one organization to change for a year at least. She may find she is better fitted for the new field or she may decide to return to her first choice. Superintendents of public health nursing organizations, should encourage their nurses to do this and make it possible for them to make the change.

The suggestion has been made that the training schools include courses in public health nursing in their curriculum and not expect nurses after spending three years in training to take up special courses. Many of the schools have arranged for lectures on these subjects, but only for the purpose of bringing before their pupils the fields open to the members of the nursing profession. Why should we expect the training school to give this special training? It should give its stu-

dents a good general training in nursing of the sick, which is the first prerequisite of a good public health nurse.

The college gives its students a broad general education. If the graduate wishes to be a librarian or a domestic science teacher, it is necessary for her to spend extra time preparing herself for the profession she wishes to enter.

Dr. Ira S. Wile in his article on the "Nurse of Tomorrow" gives the following extract from an address by Dr. L. F. Barker, of Johns Hopkins Hospital:

"Thus far, nurses have, for the most part, been content to be general practitioners of nursing, but already some have begun to specialize, and it needs only half an eye to see that the near future will be marked by an extension of this tendency to specialization in nursing. While each nurse should have a general training in fundamentals of the art, there is no reason why she should not, like the physician, choose some one particular field of work which appeals to her interest and for which her natural talents may make her especially suitable."

The work of the public health nurse in rural communities is a very different problem than the work in the large cities, and each rural district has its own peculiar problems. The nurse is not only the infant welfare, tuberculosis or obstetrical nurse, but she is the probation officer, the sanitary inspector, the C. O. S. visitor and the playground worker. Very often it is as a worker in one of these fields, that she first gains the confidence of the community. It would be an unusual woman, who could do all these things well, she may try very hard but subconsciously the line of work she likes and is adapted for will take the precedence.

Her influence in the community is very great, but will not what she has been able to accomplish awaken a public conscience, which will demand in time that the community have its special workers in the work most needed in the community?

Recently I heard a nurse who had been working in a small city in the Middle West, say when the subject of specialization or generalization was being discussed:

"From my own experience in a small town working as a visiting nurse with a settlement, there was the tendency for my Board to plan my work much as the head resident planned hers. With a settlement worker it is not so imperative that her people be seen every day and

consequently if the occasion arose her work was not lost, but it is hard to start baby work or probably have an obstetrical case or two and be exposed to smallpox as I was, any number of times last winter, and let your work drop for a week or two at a time. Even in a small town, the work could be divided so that it might be specialized; it would probably have to be under one supervisor and under one administration. It might cost a little more carfare and probably loss of time, but I believe the gain in efficiency in certain lines would more than offset the loss. The overlapping would be very much less liable to happen in a small town."

DISCUSSION

Dr. S. Josephine Baker, New York: I am going to try to keep myself to the subject matter of the papers, but I think there are at least three salient points to be discussed. I take issue absolutely with Mr. Borden when he says—I think I am quoting him correctly—"the foundation of public health nursing is the care of the sick."

There seems to be quite a difference of opinion as to what is meant by "public health nursing." You heard Mr. Folks last night, in his presidential address, and I think he emphasized the point which should be clear to all of us, that this society is wrongly named, that it is not a society primarily for the prevention of infant mortality, but rather for the prevention of infant morbidity. Just in so far as we emphasize that point will the efforts of the Association be successful. Nursing of the sick is of the utmost importance, and has a very definite status, but nursing of the well has become a profession in itself. The campaign being conducted for the prevention of infant mortality has come to be one strictly of education in the prevention of infant morbidity; that is, we are trying to teach the mothers how to keep the babies well, and we have turned aside from corrective work to efforts which are almost entirely preventive.

In the Bureau of Child Hygiene of New York City's Department of Health, we have over three hundred nurses who are devoting themselves almost entirely to a campaign of preventive health work. It is my belief that the results they have shown from this educational and preventive work in keeping babies well have been sufficiently successful to demonstrate that this is the true way to reduce infant morbidity and, incidentally, infant mortality.

The success of this movement depends upon keeping well babies well. If we focus our attention upon sick babies, it is inevitable that most of our appropriation will be spent for this purpose, and the well baby will be forced into the background. In New York City we tried this method for about thirty years, and the death rate did not go down to any appreciable extent. With the organization of the Bureau of Child Hygiene, the experiment was tried of treating sick babies only as a result of emergency calls, and definitely focusing our attention upon the problem of keeping well babies well. This work was first begun by the Bureau of Child Hygiene in New York City in 1908, and it was

necessary for the nurses employed to receive an almost entirely new line of education in preventive medicine, but the efforts in education of the mothers were so successful that we had over twelve hundred fewer deaths of babies under one year of age during that year than during the previous one.

I feel that we must keep our minds clear in this matter and must understand the importance of focusing our attention upon preventive public health work in the prevention of sickness in infancy. The public health nurse is a sanitary officer. She is, primarily, a teacher and educator but she is not, like the district nurse, a nurse of the sick.

There can be no doubt whatever that there is great danger in over-specialization. No one realizes this danger more than those of us who are working in this field, but readjustment in this line will come without destroying the basic principles upon which our work is founded. It is only necessary to keep our ideals clearly in mind. I do not believe that the time has yet come when we can have one public health nurse sufficiently well trained so that she can do every feature of the work and do justice to them all, but granted that such a nurse could be found, we have back of that an administrative problem which, in our large cities at least, it would be almost impossible to solve. We find among our nurses—and we have a large number to choose from—that practically all of them express a definite desire to do some particular line of work. Their aptitude for any one branch of the work has been well illustrated many times. One instance may be of interest. Some years ago, we tried to establish Little Mothers' Leagues throughout the city, and placed each under the supervision of the nurse regularly attached to the school where the league was organized. We found that a large number of these nurses were not particularly interested in the leagues, and that it was with the utmost difficulty that we kept up any organization; in fact, in a large number of instances, the leagues died from lack of interest long before the summer was ended. A few years ago, realizing this condition, we selected a small group of nurses who were particularly interested in the idea of the leagues, and placed them in charge of the leagues all over the city. Since that time we have had practically universal success.

Although there has been some mention of the desirability of 'generalized nursing, I have noticed that there is a distinct admission that the work of the school nurse is of such a specialized nature that it cannot be included in any generalized form. The school nurse is one of the most important nurses we have in public health work, but I cannot see how her work could be combined with that of the other types of district and public health work. She is only partly a field nurse and, of course, a large part of her function pertains to duty exclusively within the school.

It has been our experience that if a nurse is to be successful she must be definitely interested in the work she is doing, and any attempt to divide her energy and enthusiasm has resulted in a deterioration of her effectiveness. The nurse who is a great success as a milk station nurse is one whose heart and soul are in the work of the station, and the same may be said of the school nurse.

There is another difference between the nurse who visits the sick and the nurse who visits the well, in that the nurse who is doing preventive health work usually goes where she is neither expected nor, to a considerable extent, desired. The people are often suspicious and the nurse meets with many difficulties. It is her problem to adjust herself to these conditions and to use the tact that may be necessary to make herself a welcome visitor. Only after this has been done can she impress the people with her ideals of service and prove of direct helpfulness. On the other hand, the visiting nurse is usually wanted, always welcome, and frequently finds her services urgently needed.

May I not, then, sound a note of warning, and urge that there be clear thinking upon this subject and a clear understanding of just what the results may be before we embark upon the proposition which will unite two such widely dissimilar propositions as nursing of the well and nursing of the sick.

The Chairman: May we hear from Miss Beard, of Boston? After hearing Miss Beard we shall adjourn the meeting and if it is the wish of the majority that we continue this discussion this afternoon rather than take up the subject scheduled, we shall do so.

Miss Mary Beard, Boston: Underlying any form of health nursing in homes there is one principle that we must remember—i. e., that teaching is the essential thing. Public health nurses are never successful unless they are good teachers. We recognize that the tuberculosis nurse and the well baby nurse is an instructor, but I think we are forgetting that the sick nurse also is only a teacher. At the very best she can spend only two or three hours out of the twenty-four with her patient. Her success depends wholly upon her ability to teach. She teaches the patient and she teaches those taking care of the patient. If it is true that the bed-side nurse has been successful in the past only because she is a good teacher then why should we not depend upon her to learn to be a successful teacher of other health subjects.

During this discussion very little has been said about communicable diseases. Let us consider this problem for a moment. We are told that the organisms causing communicable diseases may be wholly obliterated, that it is no longer necessary that these organisms live and propagate. Just as prehistoric animals no longer exist in the world of today so the time has come when we have sufficient knowledge and machinery to rid ourselves of the germs causing communicable diseases. The method is known. If a proper technique was consistently observed in the care of a patient suffering with communicable diseases this much desired goal would be reached. This problem of communicable disease is of more importance in the large group of people whose incomes are below \$3,000—neither the very poor nor the very rich—but the group which is numerically of far greater importance than either of these. Now there is but one health nurse in the field today who enters these homes. This is the bed-side visiting nurse. The doors are open to her because her services are needed also because it is possible to pay for her services. It is evident, then, that the

bed-side nurse reaching the homes of hundreds and hundreds of patients suffering from communicable diseases may become the most effective agent for abolishing these diseases. Miss Le Lacheur has said that the subject of generalization is one which cannot be settled over-night. If we are to expect a mother in a tenement home to learn the many things taught her by, first, the well baby nurse, second, the tuberculosis nurse, third, the contagious nurse, fourth, the school nurse and, fifth, the bed-side nurse, we certainly want to be able to expect a graduate of a hospital training school for nurses also to learn these different truths and because she is essentially a good teacher to be able to impart the truths to others. It is the future for which we must plan. It is an ideal for that future which we are trying to decide upon. I am not greatly concerned that several nurses enter one home. Where friendly relations exist between the nurses there is little that is harmful in this method. I do not feel that we are now, under our present method of working, doing so badly.

I wish to make a plea that a fair trial be given before we decide that a general nurse is incapable of learning to perform with equal efficiency the functions of health teachers in the home. When this has been done the welcome which is universally accorded to the bed-side nurses will be one of the very strong assets at the disposal of health teachers in all branches of public health nursing.

The Chairman: There are others also from whom we wish to hear on this question, and there are those who have spoken who will want to reply, and it seems probable that we shall continue the discussion rather than take up the care of children between two and six years old.

A Member: I hope we may be able to hear from Dr. Helmholtz before this meeting closes.

Dr. H. F. Helmholtz, Chicago: I would like to say just one word regarding the ideals that Dr. Gerstenberger has set up; he said we should build only upon our knowledge and our experience, but according to his statements he has no personal knowledge or experience with the ideal he has set up.

The Chairman: Is there someone else who wishes specially to speak before this session closes—any one who is obliged to catch an early train? If not, the meeting stands adjourned until two thirty.

AFTERNOON SESSION

The Chairman: Dr. Alan Brown, of Toronto, has been good enough to stay over this afternoon in order to participate in this discussion. We are very glad to have him with us at this time.

Dr. Alan Brown, Toronto: I have not prepared an extensive paper, or a lot of statistics, but I merely wish to give you a few facts that show the results of generalized nursing. First of all, I might state that in Toronto we feel absolutely certain that the generalized nursing is the one to be preferred in infant welfare work. The specializing of nurses is out of the question. It is most impracticable. First of all the special nurse is an extra expense to the city, and second, from psychological reasons, the cause of unlimited friction in the family. If two or three nurses come into one family, each nurse has her own special instructions, and her own pet ideas evolved from doing special work. The mother thus may be left in a very confused state of mind as to what she should do, or what she should not do. Thirdly, the special nurse does not have the opportunity of becoming well acquainted in the family, of becoming a family friend, and therefore cannot obtain the cooperation of the family as a whole. In brief, these are our ideas concerning a special nurse, in Toronto.

I will now give in as few words as possible the results we have obtained during the last few years in Toronto, employing the system of generalized nursing. Three years ago the infant mortality was 145 per thousand births. So far this year it is 96 per thousand births, and we feel confident it will be below this mark before the first of next year is reached. We have thus made a reduction of about 40 per cent during the time that we have been working. One might say that the weather conditions in Toronto are different, that we have not got the sick infants to cope with, but this is not true. The babies in New York, in Boston, in Philadelphia, are exactly the same as the babies in Toronto, only they have different names. During the summer months of this year our mortality has been reduced to 40 per cent of what it was last year, and 66 per cent of what it was two years ago.

Our plan for infants welfare work is as follows: First of all we have the Hospital for Sick Children, with its Infant's Department, which is the centre of all public health movements for the reduction of infant mortality. This department has accommodations for 65 children under two years of age. It is built on the cubicle system, with two infants to every cubicle, separate operating room, wet nurse quarters, chart room, and chemical research laboratory, for investigation of the various diseases of children. Here post-graduate clinics are held once a week, when the clinicians in charge of the various well baby clinics, of which there are seventeen, attend and receive instruction concerning the various diseases of infancy. In addition to this they are given an opportunity to follow the sick children that they have referred to the hospital from their respective clinics. The same line of treatment is followed in feeding the entire seventeen well baby clinics. With this method we have better control of our physicians. The nurses, of which we have 34, each year are given a course of instruction on the handling and care of the infant in health and disease. In this manner they are kept abreast of the most modern treatment of diseases of infants and children, in infant welfare work. Both physicians and nurses alike are invited to discuss the cases. Throughout the city are scattered various mother craft classes, and little mother classes, for the instruction of both mothers and girls.

A plan is now on foot to establish a central milk laboratory for the dispensing of certified milk, and proteid milk, on the prescription of the physician, to the poor of the city.

In the general hospital, in the obstetrical department, where the births average 70 per month, the infants are placed immediately in control of the pediatrician, and the birth registered at the City Hall. On the discharge of the infants from the obstetrical department, the mother is presented with a book which deals with the handling and care of the infant, and a printed slip on which is given the baby's age, address, weight when discharged, weight at birth, and the type and interval of feeding, and address of the nearest well baby clinic. A duplicate of this slip is mailed to the City Hall, on receipt of which a nurse is sent to visit the home of that particular patient, and give instructions, and further emphasize the importance of bringing her child to the well baby clinic in her district. If the patients refuse to bring their children to the clinics, and are not attended by a physician, they are summoned to the Juvenile Court.

So keen is the competition that at present we are in a position to request the physicians and nurses to resign if their work is not satisfactory. There is but one item in which we have not absolute cooperation, and that is the public school nurses, which organization is not under the Department of Child Hygiene, but is a separate organization. These nurses visit the older children who attend the various public schools, but do not advise treatment, only reporting the conditions to their Department.

The Chairman: We will now hear from Miss Stringer, who will speak for Dr. Frankel.

Miss Elizabeth Stringer, New York: I wish to do not much more than heartily endorse Miss Beard's plea for the family nurse. It seems to me that the case of the family nurse is altogether analogous to the case of the family physician, who understood the family from A to Z,—was thoroughly familiar with the background and the history of each member of the family, and so had excellent qualifications to take upon himself the treatment of any case in the family—no matter what was wrong. If he found a condition which puzzled him very much then, of course, he consulted a specialist, but he did not on that account give up his patient, or think the case was out of his hands. Why not in the same way have consultant nurses or specialists in the nursing field whom the nurses could consult on some knotty point if they found something beyond their skill?

There is indeed great danger, under present circumstances, of having a family overrun with nurses, from different organizations who have not kept track of each other—a painful waste of energy and money and it certainly seems to me the best method of procedure would be if one thoroughly trained general nurse would be assigned to a small district, with the understanding that she is to call upon a nurse specialist when occasion should arise.

Mrs. William Lowell Putnam, Boston: I want to say one word in favor of special nurses for special work, because I can't but feel that any woman who is capable of being a nurse could, by taking up a special line, carry it to a higher point of perfection, and, what is far more important, I am sure that any woman who takes up the most merciful of callings—that of a nurse—could never refuse the call of one who is suffering, and that, therefore, if the general nurse undertakes both to do preventive work and to answer the call of the sick, whether it be of the young or the old, the latter would of necessity take precedence, because the sick must be attended to, and the really more important, but less appealing, preventive work would suffer in consequence. I have here a few words from the report for 1915 of the New Zealand Society for the Health of Women and Children that I should like to read to you:

"While sympathizing with the District Nursing scheme, and being willing to help it in any way, the Society felt that it must adhere to the work which it set out to do—namely, to educate and help parents and others in a practical way in domestic hygiene, with a view to conserving the health and strength of the rising generation, and rendering both mother and offspring hardy, healthy and resistive to disease. Wherever the combination with so-called 'District Nursing' had been tried, the Plunket work had to give place to the more immediately claimant needs of sickness."

Preventive nursing should necessarily be separated from sick nursing. I cannot feel that it would be right to have one nurse for the sick and the well.

Dr. C. J. Hastings, Toronto: I am exceedingly sorry that I was unable to be here this morning, but I think Dr. Brown has given you a pretty thorough outline of what we are endeavoring to do. We started with one nurse three years ago and now we have forty-five and I think that is a pretty rapid growth.

We have after a pretty careful study into the advantages and disadvantages of specialized and generalized public health nursing, decided that the generalized method has advantages that far outweigh its disadvantages and we have adopted it and I have not heard anything here to convince me to the contrary.

The Chairman: May we hear from Mrs. Max West, of the Federal Children's Bureau?

Mrs. West: I cannot speak to this question, but I would like to say just a word for the Children's Bureau. We are working through the medium of the General Federation of Women's Clubs, attempting to inaugurate a nationwide Baby Week. If anyone cares to apply for printed matter we will send it out and will be very glad indeed to do so. The other thing that I wish to particularly speak about is the fact that we are preparing to publish a bulletin on different methods of infant welfare work and especially methods that may be followed in rural communities and small towns, and if any of you are doing that

work we should be delighted to have you send an account of your work to us. Another thing I would like to mention is that we have been accused of being stingy with our literature; some people say they write to the Bureau and do not get the literature they ask for. The Bureau has only a moderate appropriation and this must pay for the printing of new bulletins as well as all reprints of old ones and the appropriation is now strained to its utmost all of the time. We want everyone to get our bulletins and we want to send them when it is possible. If any of you will write to the Bureau and give them a statement of just what you want we can arrange it for you.

The Chairman: We would like to hear from Miss Leete, of Cleveland.

Miss Harriet L. Leete, Cleveland: It seems to me we have lost sight of two points. One, spoken of by Mr. Borden, that is we must first lay a satisfactory foundation. Most of us know that we did not receive sufficient instruction in the care of babies and children when in training school; this has been recognized by the principals of training schools, and they are endeavoring to incorporate more baby training in the course.

Secondly, different cities present individual problems. Miss Fox beautifully portrayed results for Dayton, but that same plan would not be as applicable to a large city. There is no question about the rural nursing, where there is only one nurse she must do the best she can whether she has had the training or not, but she should have somewhere to turn, when she is confronted by a difficult problem, some person from whom she can receive specialized help. We do not expect the family physician to be a specialist along all lines—if the baby is very sick, he calls in a children's specialist. It should be the same way with the nurse. One should not take chances. If the first symptoms are not recognized, the baby may die; babies react so much more quickly and they cannot tell you their troubles. We must have baby nurses who know symptoms, and who will call in a consultant before it is too late. Until the time comes when our training can be more thorough and intensive it is quite essential that we should have specialized workers in order to help the generalized nurses.

Dr. Emily Ray Gregory, Philadelphia: I am reminded of a story that was told me by a children's specialist in Washington. She told me that the wealthy families engaged her to keep their babies well, that she visited their homes once or twice a month and in this way was able to keep the children in good condition. She said there were a great many people who felt that they could not afford to call in a specialist or a physician unless the child was sick and the result of that was that the poor people had much larger bills than the wealthy people, because the wealthy people kept the babies well. You won't have so many calls for the general nurse if you will keep the baby well.

Miss Amerman, New York: I fail to be convinced that the over-lapping is not sufficient to be serious, and I think we should bear in mind that we must plan for the future. If we keep on developing as we have done in the past few years, and as we all hope to develop, we will have much larger staffs than we have at the present time, and duplication cannot help increasing to a disastrous degree.

Miss Fox: May I say that I think the argument that there is no over-lapping or that over-lapping is not serious is one of the most serious indictments that could possibly be offered because if there is not much over-lapping then it means that the nurses are blind to or negligent of other health needs in the homes than those they are commissioned to report and treat. When a nurse goes into the home and sees that the mother is pregnant, that another member of the family has tuberculosis, that other illnesses or physical defects prevail, she should report and care for all these. The general nurse will do this, but the specialist who only attends to the baby or to the tuberculosis patient frequently sees nothing else, and more often she is so hurried that she fails to report other needs to the proper agencies, which explains why there is not more over-lapping apparent.

A Member: Statistics show that there is not any very serious over-lapping.

Miss Edith Madeira, Watertown, Conn.: We started generalized nursing in September and since then we have increased the number of babies about 100 per month, and the nurses are all greatly interested in the change of work. We have had to increase our force by one nurse and we need another. We are hoping to form new districts. We find the work has grown rapidly since starting the generalized nursing.

Mr. Sidney Davidson, Philadelphia: It seems to me that we are overlooking one of the most essential and practical sides of this question, namely, that of expense. Most of you will agree that this work is gradually leading to the point where the city or the municipality will take it over and wherever this is done there must be a definite, systematic and economic plan of action. Under the improved methods of municipal government where every request for money is carefully and thoroughly investigated as to its need and where every citizen may know the amount and the purpose for which money is spent, it will be a very difficult matter to secure appropriations for prenatal, prophylactic, sick babies, milk station and tuberculosis nurses to visit the same homes or to cover the same districts in the discharge of their respective duties. If the city is to take up this work and do it well at a minimum expense, the Board of Estimate or the Council will immediately ask why all of this educational work cannot be done by one nurse rather than the tremendous duplication of a specialized system such as here noted. I think we must be very careful not to ask for too

much specialization, for by so doing we will defeat the very ends for which we are working, this is, the city control of the entire educational health work.

Miss Lockwood: Is it not true that the average nurse who is doing public health work is doing it under such great pressure and with such limited time that she sometimes falls down on her task; this is due to the fact that we are doing public health nursing at the expense of the nurse who has to get in more work than she is able to do and therefore does not attend to a great many problems that exist in the home, she has not the time.

Mr. Borden: I think that what has just been stated is quite true. We have not nurses enough to look after the sick people, let alone take care of the well people. They call on the sick people and that is what we expect them to do. We need a great many more nurses than we have at present to take care of the sick, those nurses do give advice to the well and that is the foundation of public health nursing; the care of the sick, and that is the thing upon which all other activities are based. I believe that Dr. Baker has taken issue with me for some of the things that I have said this morning. Had I undertaken to engage in argument with Dr. Baker it might have been disastrous to me, but what I did say is that the care of the sick is the foundation of public health nursing, and I am willing to take issue with any one on that proposition. Now I believe in specialties, I believe in a special general public health nurse, one trained as a public health nurse; I want her to be able to pick out the things that should be done, I want her to be able to recognize symptoms, I want her to notice the child who has a club foot and see that something is done for it, I want her to talk to the expectant mother and give her instruction, and I want her to give the patient in the house the proper medical service. As I said this morning, I am not a convert to the belief that one can have too broad a view of this thing. It has been suggested that one man could be put in charge of a very small district and not only prescribe but guard against disease and also look after the district sanitary conditions and the question of social service. Now if one mere man can do that, thank God a woman can be a public nurse.

Dr. Gregory: It seems to me that this discussion shows that this is a transition period and we have all got to work together to smooth the way. I agree with what Miss Lockwood said; it is the case in a great many places and was the case in the city where I resided and we started some work among the women to train the mothers. The public health nurses were too few and it was necessary for others to assist them and the head of the public health nurses said that she would only be too glad if the women's clubs would have lectures and talks for mothers and give them these lessons about the care of their children; how to keep the children well; about the prevention of tuberculosis and that sort of work because the nurses were so busy with the actual care of sick children that they could not stop to do this other work that they would really like to do.

Dr. J. H. M. Knox, Jr., Baltimore: I have been greatly interested in this discussion, but it seems to me that the Association ought to be very careful about prescribing what shall be done in an important matter of this sort. Everybody is specializing nowadays, and we have advanced in proportion to our specialization. This is true of all professions, but particularly so of the medical profession. The general practitioner often has extended knowledge, and the country doctor is doing a wonderful work, but we have increased our knowledge and forged ahead by specialization in some particular line. A physician will specialize in children's diseases if he is interested in children, and many nurses are specializing in the same way. I have always felt that the success of the infant welfare movement is due largely to the skilful and self-sacrificing work of the field nurses, who are devoting themselves almost exclusively to babies and mothers. Largely through their work, infant mortality has been lowered and the sentiment of the people all over the country is being awakened to the need for such work. It does not seem to me that it is possible for a field nurse who is doing general nursing to give the necessary time to the educational work with the individual mothers that is the central feature of the baby welfare work. In the pressure of the care of the sick adults, the instructive work among the mothers will be unavoidably pushed aside. A nurse who has a large number of general duties cannot spend much time on the *well baby*, seeing that its milk is properly pasteurized and modified, and giving instructions to the mother.

We have gotten the public conscience aroused to the fact that the baby is the most important member of the community, and that it is entirely dependent for its well-being, upon others. We must keep the public conscience awake to its responsibilities. I hope the time will come, say in five or ten or twenty years, when we will have advanced far enough for generalization in the baby welfare work to be safe, but at present, and for some time to come while we are still in the initial stages of a movement that is so largely educational, we will have to continue to concentrate on the care of the babies and on the instruction of the mothers.

The Chairman: Will the chairman be pardoned for answering in a few words two or three statements which have not been acknowledged from the floor?

First. Those who believe that the general nurse can do this work still agree entirely with what Dr. Knox has said, i. e., that general nursing certainly should not be substituted for special until the people in any community (even a relatively small one) have been sufficiently aroused to retain their interest and support of any specialized campaign after it has been merged into the general health program. Dr. Livingston Farrand has said about the tuberculosis movement that it is only a question of time until every anti-tuberculosis association will become a general public health league, but he added that no community should take this action simply because another community has done so, but rather that each must wait until its own people are ready for it. I think that holds equally true and more so in infant welfare work, because it is so much

newer. Even the isolated nurse, doing general work, finds it necessary to emphasize first one and then another aspect of her work as it develops into a full health program.

Second. Someone spoke about the importance of economy if we are going to hope to put this under the control of the public authorities. With that we agree, but one word of warning; we only want such measure of economy as we can maintain along with technical efficiency. Up to the present time, few nurses are trained for general work, and we are not urging that such service be adopted generally or immediately, but rather, as Miss Amerman said, that we ought to be building for the future by preparing the student of today for a larger and better and more acceptable service. To this end, the courses in nurses' training schools should be so reorganized as to provide proper training for women who wish to enter public health work, and this all-important question (together with that of post-graduate courses) is being given much serious attention.

Third. In most cities of considerable size (which, it should be remembered, are of secondary consideration in this program), it will usually be advisable to designate one small district in which this experiment may be demonstrated rather than to make a radical change.

Is there any further discussion? If not, I declare this session closed and will ask Miss McKnight to preside at the Round Table Conference.

NURSING AND SOCIAL WORK

ROUND TABLE CONFERENCE

Friday, November 12, 1915, 2.30 p. m.

CARE OF CHILDREN BETWEEN THE AGES OF TWO AND SIX YEARS

MISS ELIZA McKNIGHT, Philadelphia, Chairman

The Chairman: This meeting was called together for the discussion of the "Care of Children Between Two and Six Years Old." This problem is one that comes to the notice of all those engaged in baby work. The child seems to have been neglected between these ages, that is, after it leaves the welfare station or the milk station and until it enters school. We have all kinds of statistics about babies and about school children, but no statistics or hardly any about children between the ages of two and six. This does not necessarily mean that nothing is being done for these children; the nurses who come in contact with them do all they can for them, but we have no statistics on their work, and there is no systematized plan that is being generally carried out for definite follow-up care of the children from the time they are graduated from the welfare conferences until they are of school age.

This question was discussed last year and we are going to take it up again this afternoon to see if any plan can be worked out which will give the child from two to six years old this very necessary supervision. Miss Anna W. Kerr, of the Division of Child Hygiene, of the New York City Department of Health, will open the discussion.

Miss Kerr, New York: The report presented to the Round Table Conference last year was based on a questionnaire that had been circulated very generally, and so it was not thought necessary to send out a similar inquiry this year. From the answers to a few letters written since the end of last summer, we find that very little has been done in a systematic way for children between the ages of two and six. In day nurseries where these children are grouped, health conditions are receiving attention, particularly in New York, where it has been possible to have some special studies made. Day nurseries are inspected by the Health Department, but the care given the children is under the control of the matron. Taking at random ten day nurseries, we find that seven of them had secured the services of a visiting nurse for the whole or part of a day. Physical examination of each child entering these day nurseries is compulsory and it is a part of the visiting nurse's work in cooperation with the matron, to see that these children receive treatment for defects dis-

covered. The care with which this was done and the results are most interesting. In one case out of 178 children examined, 114 were found to have physical defects and of these, 109 were treated. In another case, out of the whole number examined, 85 were found with physical defects, 76 were treated. In this latter case, 24 were operated on for defective nasal breathing. Three were treated for strabismus, three for rickets, fourteen with tubercular tendencies were closely watched and dieted and given fresh air. Five anemic children were treated by physicians and put on a special diet and seven with ear troubles were treated. Some pre-school age children are being examined at the milk stations and I think I can safely say that parents pay more attention to defects of these very young children than when they are of school age and under the supervision of school nurse and doctor.

Not a great deal has been done according to our published reports, but I wish to mention one example of careful work. At one of our milk stations, the physicians and nurses have cooperated with a nurse from the Association for the Aid of Crippled Children. The children are brought to the milk station and given exercises that help correct flat feet and other defects, under the direction of a specialist. The nurses have told me that the results are quite remarkable, the children being awakened mentally. This seems good work. A number of the children were badly nourished and it was necessary for them to have an extra diet which was provided by an outside organization. At Health Center No. 1, recently established, where these children are examined, the physician-in-charge assures me the parents are disposed to come willingly and arrangements are made for talks on the subject of "Care for Young Children." Many of the children between the ages of two and six in institutions, are found in need of care. Recently, so many defects of hearing were discovered by physicians inspecting certain of these places that a specialist was engaged to treat them, with excellent results. I have been told that some work along this line has been done in Cincinnati public schools. Is there anyone here who can tell us about that?

Miss Crandall: May I say a word for Cincinnati? I am sorry that someone who knows more about the work is not here to speak to you, but I learned just last week from the Health Officer that there was some work of that kind being done in a very limited way by allowing the children to bring their little brothers and sisters to school with them so that they might be examined by the school doctor. They are not ready to make a report but the results are very gratifying and this work has not encumbered the school medical department to any marked degree.

Miss Kerr: It seems to me that too much is being put on the Public Health Nurse. The school nurse already has more than she can attend to. There are over 400,000 children of pre-school age in New York City and although we have a generous city, it doesn't seem fair that school nurses should do this extra work. The work is being done without any excessive expenditure

of time and energy and in an efficient manner at the milk stations and it would seem that that is the logical place for it at present.

Miss Alice Hall, Providence: We have not been in this work very long, but it is true as several of the speakers have said, we have not enough nurses. I was just thinking about one thing that we do in this connection; if the mother will not or cannot take the crippled child to the clinic, our nurse does so and it really takes her a whole morning to go, take a child to the clinic and get it home again. We have found this a very difficult problem. We have never thought of dropping the children after they have reached the age of one year, we carry them on just the same as other children, although we have not been able to do a great deal for them.

A Member: Do you care for them through a special organization?

Miss Hall: Through the school organization. Dr. Stone is here and I think she could tell us something about what she has been doing, and of the work being done in the day nurseries.

Dr. Ellen A. Stone, Providence: I cannot tell you very much except that I visit the day nurseries and examine the children. We have been very fortunate in getting good matrons who follow-up the cases and get the children to go to the dispensaries to have their defects treated. In Providence children are followed by the school nurses, from the age of four and a half, the kindergarten age.

Miss Kerr: Our kindergartens are all under medical supervision and the defects of the children are followed up just as in school children; this practically insures care for the children from the ages of four to six. I would like to have some expression of opinion as to the feeling of parents when their attention is directed to defects in the children between the ages of two and four.

Miss Hall: We find some mothers who object. A good many of them do not have time to look after the children and they say they will do so just before they send them to school.

Miss Kerr: The proper time to correct these defects is when the child is young. If they are corrected then they are not likely to recur in later life—that is, if the child is thoroughly attended to.

Dr. E. R. Gregory, Philadelphia: In the city where I am at present located the school teachers have to do a great deal of work along this line, and they tell me that at times it is very difficult to get the mother to have these defects corrected. They have a number of nationalities to deal with and the great trouble is that these foreign mothers and fathers often do not understand things. I often think, from my own experience, that a great deal can be done

for these people by imparting the proper information to them. I am a Ph. D., not an M. D., a biologist, but I think I know a good deal about life and these foreign people seem willing to listen to me. I have told the mothers a good many things that they did not know and they seemed very willing to listen, but I know that in some cases their foreign prejudices are very difficult to eradicate.

Miss Bessie Le Lacheur, New York: It is often difficult to get the parents to attend to disorders of the nose and throat and also to bowed legs, but when it is a question of the children's eyes they seem to respond more readily.

The Chairman: I feel, and I believe everybody else does, that the baby is the most important subject of all; if we get the baby started well it may possibly get through the next four years, while if it is not started well, there is not much hope for it. On that account we all know that the work for babies is more important than any other, but I do not think it is possible for a woman, a nurse especially, to see the older children running around neglected. If she is a nurse, fundamentally, she will naturally help and advise and do what she can for the older children, but I think we should systematize the work, and records should be kept so that we check up our results. The people who are working along the line of infant welfare are keeping statistics, but have no records, so far as I know, in the majority of health centers of the work that is being done for the children between the ages of two and six. They have many records for babies, but the keeping of records for the older children has not yet been taken up.

Miss Kerr: At the Health Center we have a family card and also an individual record card for these children.

Mr. Sidney Davidson, Philadelphia: Four years ago the managers of the Babies' Hospital of Philadelphia decided that every child discharged from the hospital or dispensary should receive follow-up care until it reached the age of six years. It is not possible at this time to give any definite report or data on the results of this work, as such a report must be based on a very thorough study of the comparative physical condition of these children and a similar group of children who have not received such care.

As none of the children under our supervision has arrived at school age it has been impossible to make such a study. However a few of them will enter public school next year and we are planning to give to the medical examiners of the Board of Education a card showing the physical condition of each child from the time he came under our care until his admission into the school and to receive from the Board a report of their examination to be used in closing out our records. With this cooperation we hope to make a comparative study of the two groups of children and while the number will be too small to draw any definite conclusions it will, nevertheless, form a basis for future statistics and we will be glad to report on these results at the next meeting of the Association.

At the present time our nurses are following up about 900 cases and one of the direct benefits derived from this system is the close touch we keep with the family so that we are able at all times to know their social condition and to give such aid as in our power; this also helps to secure pre-natal cases during subsequent pregnancies and to get the baby into our prophylactic clinic, in other words, it is building a strong foundation for a large educational work.

A Member: Do you have any trouble with people moving out of the district and do you follow-up these cases?

Mr. Davidson: At the hospital we have no particular district from which cases are brought. It has been difficult to follow-up children discharged from the hospital owing to the fact that they come from various parts of the city and move frequently. I do not think that we have been able to follow-up more than one-third of the cases discharged from the hospital and of the 1,200 cases on our dispensary list we follow-up about 700, the others having moved without giving any address or to places too remote for our nurses to visit. All sick cases are visited as often as necessary while the discharged cases are visited on an average of once a month.

The Chairman: Has anyone else any information on this follow-up work that is being done by the hospitals?

Miss Masse: I don't think it is possible to follow-up the children until they reach the age of six. I would like to know what the general feeling is on this subject. To what age approximately would you follow-up the baby?

The Chairman: Four and a half is the kindergarten age here in Philadelphia. I don't know whether that is a standard all over the United States, but four and a half is the age here and when the baby gets to the kindergarten, it receives supervision, medical inspection and is taken care of by the school nurse. I don't know what the feeling is among other people, I would like to hear other expressions of opinion on that subject.

Dr. Gregory: I wonder if our nurses would feel that it would be a help to them if the Women's Clubs would take a definite stand in this matter. This work has been starting in the city where I have been for the past couple of years and the Women's Club has tried to get the mothers interested, and has tried to show them their responsibility toward the children. The Club is trying to teach the parents, to have the right attitude toward life, what it means to the child to have the right care, and to follow up the life history of the child; what must be done for it, not only when it is a baby but when it has reached the age of two and so on; that it must have proper recreation and must have proper reading matter put before it when it begins to read and must select proper playmates. I know that in one case the mothers were very grateful for

such help and I was told by a number of them that there was a great wave of enthusiasm sweeping over the community, that these talks had helped them and awakened them to the sense of their responsibility to their children; that they realized that it was not enough to feed and clothe the child but that they must think about its welfare. I don't know how nurses in general feel about this matter, but I would like to have an expression of opinion.

Miss Crandall: I can not speak for individual nurses or for local associations, but I am happy to say that the National Organization for Public Health Nursing is glad to cooperate with all of the State Federations of Women's Clubs and through them with local clubs and also with the National Federation. We are very anxious to interest them in public health nursing because it is such an essential part of public health work. Dr. Gregory's suggestion is most welcome and anything she can do or show us how to do to promote a closer cooperation between women's clubs and visiting nurse associations will, I am sure, strengthen the work of both.

Dr. Gregory: My idea was to stimulate interest, to make the parents feel their responsibility.

The Chairman: The women of Philadelphia will probably be only too glad to help through the women's clubs in any way they can. I know they have been most cooperable in our work. They are very public spirited and are glad to further anything connected with public health work. If you would all appeal to your women's clubs and if we could somehow have this brought before them, I am sure they would be only too glad to help.

Miss Masse: Don't you think that a number of children between the ages of two and six are being taken care of by settlement houses and day nurseries, so that we do not need to take the responsibility for their care? We all agree that we have not enough nurses for our baby welfare work and I think we can leave this other work to the day nurseries and settlement houses.

The Chairman: We sent out a questionnaire to the day nurseries in Philadelphia and we received the following returns from the 35 nurseries:

Day Nurseries

Day Nurseries in Philadelphia	35
Day Nurseries belonging to Association of Day Nurseries	23
Day Nurseries recording physical examinations.....	18 (Not recorded in 17)
Day Nurseries recording family health history.....	13 (Not recorded in 22)
Day Nurseries rejecting children from tubercular homes	7 (Not rejected in 28)
Day Nurseries furnishing night bottles under very special conditions	7
Day Nurseries accepting young infants.....	15

Approximate number of children cared for daily.....872

192 Infants	12.8 per cent
188 Toddlers	12.5 per cent
490 Kindergarten children.....	32.6 per cent
628 School children.....	41.8 per cent
<hr/>	
1498	Total

Medical Care (Inspection)

By Physician		By Matron or Nurse	
Daily medical inspection.....	2	Daily medical inspection by matron	
Bottle formulae prescribed.....	18	without nurses' training.....	17
Diet for children prescribed.....	1	By trained nurse (matron).....	5
		Bottle formulae prescribed by ma-	
		tron or mother.....	17
		Diet for children prescribed:	
		By matron	32
		By dietician	2

Kindergartens under Board of Education..... 263

Age admitted to Kindergarten..... $4\frac{1}{2}$ years

Age admitted to First Grade, Public School 6 years

Miss Crandall: May I say that in bringing this subject before you this afternoon we had no expectation of arriving at any formal action. On the other hand, it seemed undesirable to let it drop out of these programs even for one year because it bespeaks such an urgent need. We hope by this perfectly informal discussion to hasten the day when the care of children between two and six will be regarded as a part of every infant welfare or school hygiene program, even though our nursing staffs already have their hands full, and although we have not the funds in sight. We are, as Miss Amerman said, building for the future and we can only hope to stimulate the interest of the public in this as we have aroused their interest in infant welfare work, and I believe the public will be ready to take up this responsibility, also, when they are made to understand its significance and importance.

The Chairman: I would like to say that in my own work we have found whole families who need care and attention and no one was touching them, no one knew about them. We found large groups of children who were being kept at home for various minor defects but no one was doing anything for them; they had been sent home from school because of these defects and very frequently our nurses who are supposed to be doing baby work had to turn in and clean up the whole tenement house. In one case 15 children were infected with skin diseases and they did not and could not go to school; the school nurse probably did not know about them, and the disease had spread all through the tenement. Our nurse went down and cleaned the house and cared for the children and the

families. This was a baby nurse and she did the work because there was nobody else to do it. It does seem, though, that in the future some provisions should be made by which this need could be met, something also in an educational way which would make the people think of their responsibilities. This is a question that will have to be met in the future and I feel that a society which stands for as much as we do, is the proper place for this question to be thought out and for constructive plans to be formulated. I hope that next year we may be able to report progress in this direction.

PRENATAL CARE RECORDS

COMMITTEE REPORT

Your committee realizes that it is impossible to devise any form of records which will prove universally satisfactory to those interested in developing prenatal work. This is partly due to personal idiosyncracies, but more particularly to the fact that the problem presents varying aspects according as it is faced from the point of view of the pediatrician, the obstetrician, the social worker or the layman. Each of these tends to exaggerate the importance of his own side of the work and to consider the others of secondary importance. Thus, the pediatrician regards the fostering of maternal nursing as the crux of the situation; the obstetrician considers the prevention of premature labor and of toxæmia and proper care at the time of labor as the essential features; while the social worker tends to regard the improvement of maternal conditions and the increased possibility of rest for the expectant mother as the most important factor concerned.

Each of these views is partially, but only partially correct, and your committee believes that ideal results can only be obtained by the consolidation of all interests concerned.

If prenatal care can be defined as the endeavor to so treat the pregnant woman as to enable her to bring forth and raise the greatest number of normal children with the least risk to herself, it is apparent that the program is very extensive.

For the individual child, the work must begin in the early months of pregnancy—and sometimes even before conception—and continue throughout infancy; while, in a broader sense, it must cover the entire reproductive period of woman, and continue until her last born child is able to care for itself. In other words, the woman must be maintained in the highest state of physical efficiency, so that pregnancy may go on with the least danger of interruption, delivery may be safely effected, and the woman be left in such condition that she will be able to suckle and care for her child, and afterwards to conceive again with every prospect of bringing the new pregnancy to a successful termination.

Such an ideal can be effected only by hearty and continuous cooperation between the obstetrician, pediatrician, nurse and social worker. Accordingly, your committee believes that the best results will be obtained when the work is begun in the obstetrical dispensary of a well-regulated hospital, is continued in the lying-in ward, and is completed by the children's hospital with its milk fund and baby-saving agencies. In every stage of the work the socially trained nurse is essential for investigating the home, instructing the mother, following up the baby, and for seeing that the mother returns to the hospital for such prophylactic or remedial treatment as may be necessary to insure a successful termination of the next pregnancy. And it is only by her cooperation

that the obstetrician and pediatrician can learn to what extent their work has been effectual.

In our experience most hospital and dispensary records are practically useless, for while they may give satisfactory information as to what occurred in any particular illness, they do not give sufficient data as to what preceded and followed it to enable one to draw conclusions concerning the ultimate value of the prophylactic and remedial measures employed. Consequently, if prenatal records are to be of permanent value, they must contain precise information concerning the previous history of the mother, her care during pregnancy and labor, the condition of the child at birth, and its subsequent fate as well as that of its mother. For, our work must be regarded as a failure, if it does not result in a material increase in the number of children which survive a certain period, and does not lead to a definite diminution in the danger of childbearing.

Your committee presents herewith a set of records and a card of instruction for pregnant women, which are similar to, but somewhat less comprehensive than those employed in the Obstetrical Dispensary of the Johns Hopkins Hospital. They include all essential data from the time the pregnant woman is first seen until one year after birth of the baby, so that it should be possible by the analysis of several thousand of such histories to draw accurate conclusions concerning the efficiency of the methods employed.

The records include: (1) a concise account of the previous history of the mother; (2) a medical and obstetrical examination at the time of registration, in which especial emphasis is laid upon the recognition of such conditions as may lead to miscarriage, premature labor, or the death of the child or mother, or both, at the time of labor; (3) an investigation of the social and material condition of the patient and her family; (4) space for notes on subsequent visits to the dispensary or those made upon the patient in her home; (5) brief data concerning the course of labor and the puerperium; (6) full information concerning the child at the time of birth and for the first few weeks of life; and finally (7) a summary, which gives the main lines along which prenatal work was conducted, and its ultimate result as judged by the condition of the child and mother one year after confinement.

In order to cover this ground, it has been necessary to make the record quite comprehensive, but we do not believe that it can be further condensed without materially diminishing its usefulness. Your committee presents the accompanying sheets with the idea that they may serve as a general model for those interested, but is thoroughly aware that they must be more or less modified to meet the requirements of varying institutions and organizations.

(Appended herewith:

- a. prenatal record sheets
- b. card of advice to pregnant women)

(Signed)

J. WHITRIDGE WILLIAMS, M. D., *Chairman*

ELIZABETH PUTNAM (Mrs. Wm. Lowell Putnam)

CRESSY L. WILBUR, M. D.

Committee.

PRENATAL CARE RECORD

Preliminary History

No.....

Name..... Address.....

Date..... M. S. W. D. White, Black, Nationality.....

Age.....years Date of Marriage..... Has had.....children

.....premature labors,miscarriages,now living

History of previous pregnancies:

1..... 4.....

2..... 5.....

3..... 6.....

(Give date of birth of children, kind of feeding, general health. If dead give date and cause)

1.....

2.....

3.....

4.....

5.....

6.....

(One line for each child, if more space is necessary use opposite side)

Medical history of patient.....

Medical history of husband.....

History of present pregnancy:

Date of menstruation..... Expected date of confinement.....

Severe vomiting..... Constipation....., Severe Headache.....,

Oedema....., Vision....., Bleeding....., Leucorrhoea.....,

General health.....

Medical examination: Height..... feet, inches; weight..... pounds

Duration pregnancy.....months. Presentation..... Foetal heart.....

Type of pelvis.....C. D....., T. I.....cm.

Vaginal examination.....

Heart

Lungs

Urine B. P.....

Various

Syphilis..... Wassermann....., Gonorrhoea.....,

Tuberculosis..... Rhachitis....., Deformities.....

Suggestions for prenatal and obstetrical care.....

Primary Report of Visiting Nurse

Occupation.....	Occupation husband.....
Character of home.....	Condition of home.....
Family income per month \$....., Number supported by it....., Intelligence of family.....	
Can be delivered at home; must enter hospital.....	
.....	
.....	
.....	

Subsequent Examinations

[illegible]

(If either parent has syphilis, insist upon prompt treatment. If urine presents more than trace of albumen make daily Esbach readings and blood pressure observations. If no improvement, send to hospital at once. All patients with contracted pelvis, profuse bleeding or a history of previous difficult labors must be sent to hospital)

Additional notes.....

History of Labor

Delivered by.....

Date....., Duration.....hours, Presentation.....

Spontaneous, operative, complicated; easy, moderate. difficult.....

Operation..... Indication.....

Perineum not torn; torn, I, II, III: Repaired.....

Complications

History of Puerperium

Normal, abnormal. Highest temperature..... Got up.....th day

Discharged.....th day. General condition.....

Complications

Birth certificate filed.....

History of Child

Term, premature, miscarriage. Normal, abnormal: Alive, dead, macerated.

Sex..... weight.....lbs.....ozs., Length.....inches

Abnormalities

Feeding: Breast, bottle, bottle and breast. Eyes.....

If miscarriage, why?.....

If premature, why?.....

If stillborn, why?.....

Syphilis..... Wassermann.....

At the end of two weeks: Alive, Dead..... Weight.....lbs.....ozs.

General condition.....

If dead, give date and cause.....

Summary at End of Year

Child: Stillbirth, premature labor, miscarriage.....

Alive, weight.....lbs.....ozs. General condition.....

Died at.....months, from.....

Supervised by..... Feeding.....

Mother:

General and pelvic condition.....

Operations, if any.....

Condition compared with that before delivery.....

Main directions of prenatal care:

Syphilis. Toxaemia. Rest. Improved general condition. Dieting in contracted pelvis.
Insistence on breast feeding. Hospital delivery. Postnatal care of baby. Hospital care
for mother during year.

.....
Was prenatal care successful?.....

If not, why?.....

.....
Notes

.....

.....

.....

.....

.....

.....

.....

.....

.....

INSTRUCTIONS FOR EXPECTANT MOTHERS

1. A nurse will make an appointment to call at your home to give you further advice a few days after your visit to the Dispensary. Try to be at home when she calls.

2. Come to the Dispensary on the same date each month, and bring a bottle of fresh urine with you.

3. Return at once if you have:

- (1) Pain.
- (2) Bad headache or dizziness.
- (3) Much swelling of face or legs.
- (4) Chills or fever.
- (5) Soreness of private parts.
- (6) Severe Constipation.
- (7) If you don't feel the child move.

4. If you bleed, send to the Hospital for the Doctor, and go to bed while awaiting his arrival.

5. Take plenty of out-door exercise, but do not overtire yourself. Avoid unnecessary work in the last three months.

6. Avoid indigestible food and alcoholic liquors. Drink two quarts of fluid each day (milk, water, soup, tea, coffee, lemonade or seltzer).

7. Avoid sexual intercourse in the last month.

8. Remember that the very best food for the baby is your own milk, so if you desire to raise a healthy child make every effort to nurse it.

9. If you are to be confined in the Hospital enter it as soon as your pains start and bring your card.

10. If you are to be confined at home:

- (1) The nurse will call a month before you expect the baby to see that you have everything ready.
- (2) As soon as your pains are strong and regular, send your card to the Hospital.
- (3) Do not let anyone examine you with the fingers until the Doctor comes. *It is dangerous.*
- (4) After labor you will be visited by the doctor and nurse as long as necessary.

11. If you desire it a nurse will visit the baby until it is a year old.

**AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT
MORTALITY**

1211 Cathedral Street, Baltimore, Maryland

**Outline Suggested for Reports of Affiliated Societies for the Year Ending
October 1, 1915**

Reports were asked for in accordance with Article X of the By-Laws. The headings given below were intended to be suggestive only and the Affiliated Societies were asked to include in their reports brief descriptions of any other distinctive features of their work. The marginal figures in the reports which follow, refer to corresponding ones in the outline.

- I. Name and address of organization.
- II. When organized.
Is your work carried on all the year round?
- III. How many babies were cared for by your organization
during the year ending October 1, 1915—
during the year ending October 1, 1914—
during the year ending October 1, 1913—
- IV. How many mothers have you reached during the year ending October 1, 1915?
What nationalities were represented?
If possible give number or percentage of each nationality.
- V. How many doctors on your staff
during the year ending October 1, 1915—
during the year ending October 1, 1914—
during the year ending October 1, 1913—
How many nurses on your staff
during the year ending October 1, 1915—
during the year ending October 1, 1914—
during the year ending October 1, 1913—
- VI. What was the infant death rate in your city or town—
For the year ending Dec. 30, 1914—
For the year ending Dec. 30, 1910—
(That is the rate per 1000 births. Your Health Officer will be able to give these figures.)
- VII. Outline briefly growth and development of your work.
Are you carrying on prenatal work or postnatal only?

PRENATAL

- VIII. What are the distinguishing features of your prenatal work
 - a. When started
 - b. How many mothers have you instructed or cared for
 - c. Sources from which mothers come—that is, obstetrical clinics, hospitals, etc.

- d. Character of instruction—by whom given
- e. Number of months under your care.
- IX. What effect has the prenatal work had in
 - Reducing the percentage of deaths during the first month of life
 - b. Reducing the percentage of stillbirths
 - c. Increasing breast-feeding
 - d. Increasing the demand for skilled obstetrical care
 - e. Give figures, if possible.
- X. Have you direct relations with maternity hospitals, out-patient or in-door service; describe.
- XI. What provision do you make for the care of the mothers during confinement?
 - Does your staff include obstetrical nurses?
 - If the mother is cared for at home, what provision do you make for installing caretaker?

POSTNATAL

- XII. What are the distinguishing features of your postnatal work?
 - What is the age limit of the babies under your care?
- XIII. Have you direct relations with a hospital for babies?
- XIV. Are you carrying on any special, organized work for the prevention of blindness?
- XV. What provision can you make for the care of homeless babies? Describe in detail.
 - In the case of boarded out babies, do you follow the "one child per home" system?
- XVI. What provision do you make for follow-up care of the children who have been graduated from your infant welfare conferences?
- XVII. Have you a department of Child Hygiene in your city or town or state?
 - If so, how is its work carried on? What is its scope?
 - Is your organization affiliated with it, or in touch with it in any way?
- XVIII. What effect has your work had on the plans of the Department of Health of your city or town?
- XIX. Is infant or child hygiene taught in your public schools? If so, by whom? To what grades? Are courses in home-making given in your public schools? If so, in what grade?
- XX. Is your organization the only one engaged in baby-saving work in your city, or town?
 - If it is not the only one, how is the work adjusted to prevent duplication or over-lapping?
- XXI. Do you make any special effort to interest or instruct the fathers? If so, describe it as fully as possible.
- XXII. Have you enlarged your work in any way, or made any special changes in your methods during the current year? If so, please describe as fully as possible.
- XXIII. Do you find it possible to utilize volunteer workers, or is all of the work done by your doctors and nurses? If you do make use of volunteer helpers, what duties are entrusted to them, and how is their work organized and supervised?
- XXIV. What are the duties of your "Board of Managers?"

- XXV. What is your annual budget? How are your funds raised—by special appeals, by appropriations from the city or state, by annual subscriptions?
- XXVI. For Infant Welfare Organizations
and
For Nursing Organizations, especially.
- a. Is any arrangement made by your organization whereby nurses while in training, or graduate nurses, have an opportunity of getting instruction in practical baby-saving work, in connection with baby welfare conferences; milk stations; special hospitals for babies, etc.?
 - b. Is any welfare work being carried on in rural communities under the supervision of your organization? If so, please outline its character, scope and results.

REPORTS

For the Year Ending October 1, 1915

CANADA

BABIES' DISPENSARY GUILD, HAMILTON (Incorporated)

Hamilton, Ontario

I. and II. Babies' Dispensary Guild, Hamilton (Incorporated), Headquarters City Hospital, Hamilton, Ontario. Organized June, 1911, for work throughout the year.

- III. During the year ending October 1, 1915.....789 babies cared for.
During the year ending October 1, 1914.....570 babies cared for.
During the year ending October 1, 1913.....491 babies cared for.
- IV. Number of mothers reached during year ending October 1, 1915, 571.

English	163	Colored	1
Canadian	248	Russian	10
American	4	Austrians	2
French-Can.	3	Hungarian	16
Dutch	1	Irish	4
Polish	17	Scotch	47
Italian	32	German	2
Roumanian	2	Not classified	19
		Total.....	571

- V. Medical staff year ending October 1, 1915.....17
(5 of whom have gone to the front)
Medical staff year ending October 1, 1914.....16
Medical staff year ending October 1, 1913.....12
Nursing staff year ending October 1, 1915..... 3
(with extra half-time nurse July 5th to Sep. 30th.)
Nursing staff year ending October 1, 1914..... 2
(with 3rd during summer months.)
Nursing staff year ending October 1, 1913..... 2

VI. The following figures concerning the infant death rate in Hamilton were obtained from births registered. (Registration not complete.)

For the year ending December 30, 1914.....181, to 3 years of age.

For the year ending December 30, 1910.....158, to 3 years of age.

VII. Growth and development of work: During the summers of 1909 and 1910 the Victorian Order of Nurses undertook to supply clean milk, properly pasteurized and made into suitable formulae to sick babies. This was sold at various depots. Although results were good, it was found necessary in order to continue the work to resort to less expensive methods.

In June, 1911, the Babies' Dispensary Guild started work with accommodations in rooms in a house near the City Hospital. Daily clinics were held to which mothers were advised to bring their babies on the same day of each

week, so that individual cases might be followed by the same doctor. A full history of each new case is taken, patient examined by the physician, who prescribes the feedings. These are explained and demonstrated by the nurse, usually at the dispensary, the next day. Shortly after this the nurse makes her investigation visit.

Breast feedings are encouraged, and the number of breast-fed babies in attendance is gradually increasing. Otherwise simple dilutions of whole milk are ordered by the doctor. Certified milk is sent to the homes daily and when possible is sold to the mothers at wholesale rates. Our Women's Board meets the expense of necessary free milk and supplies.

In 1913 the City Hospital took over the property where we had our headquarters and, failing suitable office accommodation, this institution has given us the use of part of their Out-Door Department. This change necessitated the discontinuing the mothers' weekly sewing-class which we hope to be able to arrange for again. We have now two branch depots with weekly clinics, and this summer one suburban weekly clinic.

Although the work was somewhat hampered through lack of funds our reports show a growing increase of admissions, better attendance at clinics, and encouraging cooperation on the part of the mothers and a more wide-spread interest among the general public. There is a deeper realization of the importance of baby welfare work to the nation, especially in view of the ravages of war. In this connection, Lady Aberdeen in a recent address to the National Council of Women in Hamilton stated that the English Government last year promised to pay half of out-lay on baby saving work, whether of an organization or authorized individual.

VIII.-IX. Prenatal work: Although we have no prenatal clinic, as yet, a number of such cases are reached through our mothers at the dispensary. Expectant mothers are visited from time to time by one of our nurses, advised as to diet, clothing and medical care, and in needy cases extra food is supplied. Most of these cases in time bring their babies to the dispensary and are able either entirely or partially to nurse them.

XI. Prenatal cases not coming into the hospital are referred to the Victorian Order of Nurses, who do a good deal of obstetrical work.

XII. Postnatal work: Instruction regarding general care of infants and infants' food, and general hygiene. Age limit of babies under care two years.

XIII. No direct relations with hospital for babies.

XIV. No organized work for the prevention of blindness.

XV. Cases of homeless babies referred to Infants' Homes or Children's Aid Society.

XVI. There is no follow-up work of babies leaving our clinics, excepting cases admitted to the City Hospital with which we always keep in touch.

XVII. We have not a Division of Child Hygiene in our Department of Health.

XVIII. As a result of our work the general milk supply of the city is much improved.

XIX. Child hygiene is taught by the school nurses only. Mothers' meetings are held in one school.

XX. A children's department in the City Hospital does no outside work, but occasionally refers discharged patients to us.

XXI. The fathers out of work are encouraged to bring their babies to the clinic. The Italians often do this of their own accord.

XXII. Last December our first branch depot was opened in rooms given for the purpose in the east end of the city. This weekly clinic soon outgrowing its accommodations was moved to a neighboring school through the courtesy of the Board of Education. In February a second weekly clinic was started in the north end. The population here is largely foreign, and we are indebted to a Hungarian Presbyterian missionary who frequently acts as interpreter.

During the summer months a third weekly clinic in one of the suburbs was held. The new depots called for an increase in the nursing staff, and a much-needed office clerk was established.

XXIII. We have a dependable group of volunteer workers, one of whom assists each day at the clinics in weighing the babies. Before we had any office clerk one of our faithful volunteers proved an efficient bookkeeper, giving up her afternoons for weeks at a time in order that the work might be finished before six o'clock.

XXIV and XXV. The Board of Managers, consisting of four elected members (two from a large Board of Directors and two from the Woman's Board), undertakes the general management of the work, and procures and administers funds largely obtained by subscriptions, pledges and membership fees. We have a small provincial grant and this year a municipal grant of one thousand dollars (\$1,000.00). In June "Baby Welfare Week" proved valuable advertising and was successfully followed up by a campaign for subscriptions.

XXVI. Our suburban weekly clinic this year from July 1st to September 30th created much interest. There were 24 babies on the roll, nearly all breast-fed, with an average attendance of 14. We secured the delivery of certified milk for which the demand was small. The public-spirited citizen who made this branch possible intends to support it another summer, and in order to hold the mother's interest is organizing a mothers' meeting for the winter months.

With deep regret we announce the death on October 6th last, of our devoted supervising nurse, Miss Helen N. W. Smith, who took charge of the work when the guild was organized in 1911, only to give it up last spring on account of ill health. Believing in its possibilities, Miss Smith gave herself unsparingly to building up the work; and it is due to her self-sacrifice and untiring effort that we are a recognized factor for good in our community.

HELEN R. MACDONALD, R. N., *Supervising Nurse.*

UNIVERSITY SETTLEMENT MILK STATION

Montreal

Carried on all year; 80 babies cared for daily. Staff consists of two doctors and one nurse. The station cooperates with the Department of Health, which has one representative on the General Committee. Annual budget \$3,000.

STATION CLINICS (Dr. Fred. S. Swaine)

The object of the Station Clinics is to teach the mothers how to feed and care for their infants; also to furnish good milk, plain and modified, for use at home. The Clinics are held twice weekly, Wednesday and Friday, from 3 to 5 P. M. On these days the babies are brought to be weighed and examined; feedings are discussed and advice given. One of the difficulties which are dealt with is the excessive use of all the known varieties of proprietary foods. One of the valuable lessons learned by the patrons is to find the milk modification best suited to the individual case. After this has been determined the mother is clearly and intelligently instructed how to prepare the feeding at home. In many

cases the milk is modified at the station; sufficient feeding for twenty-four hours is put in a sanitary pail and surrounded by ice and called for each day by some member of the family.

The unsanitary condition of the home is another evil to contend with and also the ignorance of the mothers. To overcome these the nurse makes frequent visits to each home and renders valuable assistance and advice; in extreme cases the City Health Department is notified and they have always responded promptly and effectively. Prenatal clinics where expectant mothers are instructed in personal hygiene are receiving increased attention. Prenatal work offers great opportunity in this City and Station.

THE DISTRICT (Miss K. Carr)

The most densely populated section of the city. Here there are peoples from the following nations: Russia, Poland, Greece, Roumania, Sweden, Norway, France, the British Isles, Italy and Austria. Many of them are unable to speak English, although they have resided in this country for several years. Pioneers lured by the fascination of a new land and its unknown possibilities, utter strangers indeed they arrive with their traditions of many generations of the home land to adjust to a new environment. Their natural reticence and the consciousness of the difference from ourselves lead these wanderers, who are now our citizens, to seek refuge in some basement near others of their kind. The suspicion of all modern methods of hygiene, in houses and surroundings offering so little of sanitation makes the work of education at once the more difficult and important. For here they live, year after year, bringing into the world innocent victims—Canadians—who are deprived at the outset of all their rights to health and morals.

T. ARTHUR MCBRIDE, *Manager*.

CONNECTICUT

CONNECTICUT CHILDREN'S AID SOCIETY

Hartford

The Connecticut Children's Aid Society was organized in 1892 for the care and protection of children. About 100 infants receive care yearly through our organization by being boarded in private families or with their mothers. Our homes are carefully selected by a competent visitor and are regularly inspected. Our aim is to have not more than three children in any one home and we have been fortunate many times in placing infants so that only one child is in a family, which generally insures excellent care.

The infant death rate for the city of Hartford, in which our office is located, was 118 to each 1,000 births registered in 1910 and 108 to each 1,000 births registered in 1914. The present laws regarding registration are working out very well in this state, as there has been great decrease in the number of unregistered births that have come to the attention of the Board of Health through the death of infants. It has been suggested that our state should require that each school child bring a birth certificate and possibly such a bill will be passed at our next session.

The only prenatal work done by this organization is in the circulation of literature which has been furnished by the American Association for Study and Prevention of Infant Mortality.

There is no age limit for the care of infants. Whenever possible, we arrange for mothers to keep and nurse their infants. Infants who are ill are sent

to the general hospitals or in summer can be cared for at the Babies' Hospital, an institution with which we have close cooperation, but no direct relations.

Child hygiene is taught in our public schools.

The Visiting Nurse Association, including the Milk Station, the Hartford Dispensary, the Shelter for Women and the Woman's Aid Society are all doing important work for infants. We cooperate with them all and by the use of the Confidential Exchange are prevented from duplication of the work. As yet there is no territorial division to prevent over-lapping.

The work for infants is largely managed from the office, important matters only being referred to the Board of Directors. Our receipts for last year were \$40,914.38 from donations, subscriptions and money paid for board.

The above report refers to our work in Hartford. In other cities of Connecticut we come in contact with the local workers in much the same way, however, of course, the larger cities have better facilities for the care of infants than do the small cities.

ELIZABETH A. HOLCOMB, *Secretary.*

INFANT WELFARE ASSOCIATION

New Haven

I.-II. The Infant Welfare Association of New Haven was organized in 1909. For first three years it was a sub-committee of the Consumer's League of Connecticut.

The work is carried on in full from May 15 to October 1, and in part during the time intervening.

III. Babies cared for to October 1, 1915.....910
 October 1, 1914.....738
 October 1, 1913.....536

V. Doctors on staff to October 1, 1915..... 4
 October 1, 1914..... 4
 October 1, 1913..... 4

Nurses on staff to October 1, 1915..... 4
 October 1, 1914..... 4
 October 1, 1913..... 4

These had extra assistants when there were many sick babies.

VI. Infant death rate in New Haven for year ending December 30, 1914....16.
 for year ending December 30, 1910....26.

VII. This association was organized in 1909 as a sub-committee of the Consumer's League of Connecticut, called the Pure Milk Committee. In 1912 it became a separate organization under its present title. It has recently been incorporated.

Two other important changes took place in 1912. The year before there were three stations at which pure milk was distributed; at one of the three it was modified by a nurse. Now an educational policy was adopted in accord with which the mothers were taught by the nurses how to modify the milk themselves. This effort to educate the mothers and to make them realize their own responsibility for their babies has been continued with success. At the same time we began to employ nurses from the Visiting Nurse Association. Miss Gilbert, a visiting nurse who had received special training in baby-work, was appointed as our head nurse. Under her capable leadership, the work has increased in unity and efficiency and in the confidence of those for whom it is intended. Four stations were opened in 1912 for the summer season, each in

charge of a nurse and doctor. At all milk was distributed daily to those desiring it; the babies were brought to be weighed and prescribed for at weekly conferences and instruction was given, followed by home-visiting. The same plan is carried out at present and more assistants are employed yearly to provide for the growth in numbers. Conferences at two of the stations have been maintained throughout the winter and nurses employed for as much time as our funds would permit. We cooperate more and more with the Visiting Nurse Association, the Board of Health, the New Haven Dispensary and the Yale Medical School; the latter holds clinics at our conferences. At one time we started prenatal work, but on account of the pressure of post-natal, we were obliged to discontinue it. It is carried on to a slight extent by the visiting nurses and by the Dispensary.

XII. We try as far as possible to develop a sense of responsibility in the mothers. Therefore we encourage them to have their own milk-men and to bring the babies for treatment to the stations rather than to wait for the nurses to hunt them up, and we try to make them realize that, though we will gladly aid to any extent, the ultimate responsibility is theirs.

The age limit is two years, but it may be extended if cases are below normal.

XVI. In one district we have arranged this year to place the children who have been graduated from our infant welfare conferences under the supervision of a private dispensary in the neighborhood.

XVIII. The Department of Health is now much interested in our work. The Health Officer has expressed a desire for more cooperation and has asked to have our nurses instruct the school nurses. The latter have sent cases to us.

XIX. The Board of Education has been experimenting on these lines in two or three schools where the school nurse meets eighth grade girls and teaches them as practically as possible about the care of young children. No books are used. Cooking taught in seventh and eighth grades includes some study of household supply of food, food values, etc. Sewing in grades 4 to 7.

XX. Our Association is the only one in New Haven devoted especially to baby-saving work, unless the general visiting nurse work comes under this head. The Visiting Nurse Association takes care of the new-born while it has charge of the mothers and it cares for sick babies not under our care. Since we employ visiting nurses there is no danger of duplication.

XXII-XXIII. This year there has been development in the duties of untrained assistants; these, under the nurses' supervision, sell the milk, put up the special formulas, make calls on well babies and in general free the time of the nurses for the sick babies for demonstrations and other necessary matters. In this way we have handled a greatly increased enrollment at little more expense and without harming the quality of the work. We have had one volunteer in this group and hope to develop more in this respect.

XXIV. The Board of Managers meets monthly to discuss and vote upon the general business of the association. The members serve on special committees, such as Press Committee, the Supply, Nurses, and Finance Committees.

XXV. Budget about \$2,700. The funds are raised by special appeals and by annual subscriptions.

XXVI. We have cooperated with the Visiting Nurse Association in their summer course in social service work for graduate nurses. The nurses have been given lectures by our head nurse and each one has had a month's practical experience in the baby-saving work.

CORA W. SMITH, *Secretary*.
(Mrs. David S. Smith)

DISTRICT OF COLUMBIA

WASHINGTON DIET KITCHEN ASSOCIATION

I.-II. The Washington Diet Kitchen Association was established in 1901, and incorporated in 1914 for exclusive infant welfare and prenatal work.

Report of work during year ending	Oct., 1913 1 Sta. 4 mos.	Oct., 1914 1 Sta. 1 yr. 5 Sta. 5 mos.	Oct., 1915 5 Sta. 1 yr.
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III. Number of Babies cared for..	76	972	1749
Number of Station visits.....	541	4715	11997
Number of Home visits.....	553	4674	9863

IV. Prenatal work			
Number of patients.....			171
Number of Station visits.....			555
Number of Home visits.....			761

V. Number of doctors on staff during year ending.....	Oct., 1913 3	Oct., 1914 20	Oct., 1915 24
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Number of nurses on staff
during year ending

	Baby nurses	Matron	Prenatal Nurse	Super-tendent
October, 1913	1	0	0	0
October, 1914	4	1	0	1
October, 1915	5	1	1	1

VI. The death rate for Washington, D. C., was	
During year ending December 31, 1914.....	100.3
During year ending December 31, 1910.....	152.1

VII. The Washington Diet Kitchen Association was first formed to distribute nourishing foods to the sick poor. The evolution of the functions of the organization from the one indicated to that of exclusive infant welfare work occurred in a natural sequence wherein milk, found to be the most needed food, displaced all other nourishments dispensed; sick babies demanded most of the energies of the association because they required milk, and furthermore good milk. Although the Diet Kitchen for some years furnished milk through the agencies of other organizations, and in later years exclusively to babies and small children, coincidentally there grew up the necessity for real welfare endeavor among its patrons.

In May, 1913, an experimental infant welfare center was opened and because of its marked success this unit was multiplied until at present five stations are maintained. The critical factor bringing our sudden expansion from one to five stations was the necessity that some organization take up the milk station work which had been conducted for some time as a private philanthropy by Mr. Geo. M. Oyster, his five stations being terminated by him after our experimental center had been in operation about seven months.

To further intensify the welfare part of our work, the term "center" has been substituted for that of "station," as the latter is often used in its narrow significance to indicate a place for the dispensing of milk only.

PRENATAL.

VIII. Prenatal work in conjunction with the welfare centers was begun in January, 1914; for a year conferences were held at one station only. There are now prenatal conferences in operation at three of the five centers and the

services of one nurse are utilized exclusively by this department. From January, 1914, to September, 1915, we cared for 244 mothers. Our patients come principally from infant welfare centers where prenatal work is conducted; Visiting Nurses' Association, Associated Charities and Board of Charities.

Central conferences are held where women are measured and examined and where they receive bi-weekly instruction by physicians until confinement. Urine and blood pressure examinations are made and special follow-up work of all "specific" cases after confinement is done.

Instruction in the hygiene of pregnancy and preparation for confinement is given by doctor and nurse. Patients have been under our care from one to seven months. Very much earlier now than formerly. Average from January, 1914, two and one-half months.

IX. All our mothers thus far have had the ability to breast-feed their babies. Where this has not been done the cause must be looked for among economic ones, and the work of the infant welfare nurse has done more to alleviate that than any prenatal supervision. Prenatal work has practically eliminated the midwife in our limited field of endeavor.

Sewing conferences for instruction in making model layettes have proved very successful.

X. We have no official connection with any hospital or dispensary but cooperation with many of the city institutions is closely maintained. Center No. 3 is conducted in the Children's Hospital, in rooms which the hospital has kindly placed at our disposal. This is naturally one of the most useful centers. The Diet Kitchen's physicians are represented on the visiting staff of nearly every institution which has a children's ward or out-patient service, thus ensuring an active reciprocal relationship.

The prenatal work is carried on in conjunction with the teaching departments of the George Washington and Georgetown Medical Schools, a representative from each holding office on the prenatal staff.

XI. Patients are referred to any hospital doing good obstetrical work. Our staff does not include obstetrical nurses; we cooperate with the Instructive Visiting Nurse Society and when necessary we refer patients to the Associated Charities.

XII. Our working technique is based largely upon the experience of older organizations to whom we naturally turned for our earlier guidance and in form, closely follows well recognized standards. Especial emphasis is laid upon home modification of milk, there being no stock-formula feeding, and modification at the center is only employed in demonstration work or in particular instances necessitating the same.

Perhaps we deviate from the routine in the actual number of conferences by the physicians maintained throughout the year at the various centers. Several cities report one conference a week; we have the following: at two centers, four conferences per week; at three centers, three conferences per week. It is our belief that frequent conferences conducted by physicians implies a closer supervision of the babies, enhances results and forms a substantial basis for faithful attendance on the part of the mothers.

With no boasting spirit, we believe we possess about as attractive quarters for our welfare centers as can be found in any city maintaining such. This brings us a large attendance of mothers. We aim to offer them a social center, comfortable, attractive and hospitable, perhaps we might say esthetically alluring, and in this way our mothers of breast-fed infants find a reward in attending conferences almost as great as that offered by a free quart of milk. It represents to many of our patrons a sort of "Mothers' Club," for mothers with

infants in arms are distinctly "clubable" individuals—the baby and his accomplishments easily forming a basis for conversation and acquaintance.

XIV. Our field nurse visits all cases referred by the Board of Health in specified districts, within 48 hours, reporting infected eyes to the Health Department and supervising treatment.

XV. Our work relates to homeless babies in a limited way only, our centers have secured homes for infants whose mothers have been compelled to work during the day, and often stay in their places of employment at night as well. While our association has not acted in an official capacity with the child-placing agency of the city, the Board of Children's Guardians, we have endeavored to cooperate with the latter in every way possible and we believe that the time is not far distant when the welfare center will be utilized to a far greater degree than at present in securing proper homes for the placing of infants and in conducting the constant supervision that is the sine qua non of all boarding-out systems.

XVI. We have no means of providing care for children over two years of age, but gladly keep in touch with those of our "graduates" whose mothers wish to avail themselves of our advice. There is great need for follow-up work.

XVIII. There is no department of Child Hygiene in our city.

XIX. Child Hygiene is taught in the public schools by the teachers from the primary department up. The efficiency of this work depends on the individual teacher. No home making is taught.

XX. The Washington Diet Kitchen Association is the only organization devoted exclusively to infant welfare work. The Instructive Visiting Nurse Society does the field work in specified districts and the cooperation of the two organizations is so close that there is no chance for overlapping.

XXII. During the summer months the Washington Diet Kitchen Association in conjunction with the Instructive Visiting Nurse Society has maintained a cooperative center in the northeast section of the city. This additional center was established to meet the summer wants, but its growth and success have been such as to presage the necessity for its continuance as an all the year center.

XXIII. We have had very good assistance by volunteer workers in class and club work. This work has been done by the Junior Auxiliary under the supervision of the President of the Board and the Superintendent.

XXIV. The Washington Diet Kitchen Association is composed of women members and its Board of Managers is the working body which transacts its affairs. The Executive Committee of the Board has the actual direction of matters of finance and administration. Personal interest in the various centers is further insured by the selection of directresses who are assigned to each center. Elections to the medical staff are made by the Board of Managers on nomination of candidates by the staff.

XXV. Through the activity of the Board of Managers the annual budget of \$10,000 is secured by sustaining dues, contributions, returns from entertainments, etc., there being no municipal aid available.

XXVI. We are arranging with one of the large hospitals to send pupil nurses to us for instruction in practical infant welfare work—this cooperation we hope to start the first of the coming year.

JOSEPH S. WALL, M. D., *Medical Director.*

ESTELLE L. WHEELER, R. N., *Superintendent.*

FLORIDA

INFANT WELFARE SOCIETY

Jacksonville

I-II. This society was organized in February, 1913, and active work started in July of that year. One nurse has been employed by the association and naturally she has not been able to cover the territory where this work is needed. It is the hope of the association that one or two additional nurses will be employed for the coming year. Birth registration serves as a starting point for the work to the extent that the nurse follows up as many of the recorded births as possible. About one-eighth of the infant population is reached by the work of the society. The work is carried on during the entire year.

V. We have one nurse who is assisted from time to time by the department nurses. About six physicians have lent us their aid.

VI. The work was started in the summer of 1913 and we believe it has had a marked effect on infant mortality and morbidity. In 1912 our infant death rate per 1000 births was 133.8; in 1913, 110.3 and last year, 1914, 94.0. The present outlook for 1915 is for a still further decrease. Our birth rate in 1914 was 26.6.

VII. The infant welfare nurse works in close connection with the school and district nurses of the health department. Her headquarters are in the office of the City Board of Health and general supervision of the work is exercised by the health officer. The work of the Infant Welfare Society is in close touch with that of the Associated Charities, Woman's Club and the Children's Home Society.

VIII-X. Prenatal instruction is given and talks to mothers by physicians at meetings which have been held in school houses, also by nurses in the homes. There has likewise been held once a week, for the past year, a prenatal clinic in the city dispensary with a physician and nurse in attendance. Obstetrical service has been furnished both in the home and hospital.

XII. Postnatal work has likewise been carried on in the manner indicated under VIII. It has dealt with breast feeding, the care of the baby, the mother, bottle feeding where necessary, such as modification of milk in the home, care of sick babies, etc. We have no infant welfare stations, but where needed cow's milk from an approved supply is furnished to those unable to secure it and its modification supervised by the nurse.

XXV. The work is financed entirely by voluntary contributions.

C. E. TERREY, M. D., *Secretary.*

ILLINOIS

INFANT WELFARE SOCIETY

Chicago

I-II. Organized in 1910. The work is carried on all the year round.

III. Babies cared for

during the year ending January 1, 1913.....3,678

during the year ending January 1, 1914.....5,492

January 1 to October 1, 1915.....8,041

IV. Mothers reached during the year—January 1 to October 1, 1915—8,041.

V. Staff: Doctors

during the year ending October 1, 1915.....21
 during the year ending October 1, 1914.....20
 during the year ending October 1, 1913.....13

Nurses

during the year ending October 1, 1915.....25
 during the year ending October 1, 1914.....21
 during the year ending October 1, 1913.....14

VI. Infant death rate in Chicago was between 15 per cent and 18 per cent.

Death rate in the Infant Welfare Society

for the year ending December 31, 1914.....3.8 per cent.

for the year ending December 31, 1911.....4.2 per cent.

VII. We are carrying on postnatal work, but nurses are doing prenatal work in homes where babies are under their care.

XII. Age limit of the babies under our care, 2 years.

XIII. We have direct relations with a hospital for babies

XV. Children who have been graduated from our infant welfare conferences are referred to the Visiting Nurse Association if ill.

XVI. Homeless babies are referred to the Illinois Children's Home and Aid Society.

XXV. Annual budget, \$45,000; raised by special appeals and annual subscriptions.

EVELYN M. WELLES, *Pres. Woman's Auxiliary.*

(Mrs. E. P. Welles)

INDIANA

CHILDREN'S DISPENSARY AND HOSPITAL ASSOCIATION

South Bend

I.-II. The Children's Dispensary and Hospital Association, of South Bend, was organized in 1908. Our work extends through the year.

III. Number of babies cared for

during year ending October 1, 1915.....308

during year ending October 1, 1914.....205

during year ending October 1, 1913.....117

V. Staff: Doctors

during 1915.....7

during 1914.....6

during 1913.....6

Nurses: One since the beginning of the work in 1908.

VI. The infant death rate in South Bend

For year ending December 31, 1914..... .095

For year ending December 31, 1910..... .135

XII. We are carrying on postnatal work only. We do this by the means of clinics where the mothers are instructed by physicians. Clean milk is also furnished and disease treated.

XIII. We have direct connection with Epworth Hospital.

XV. Our homeless babies are referred to a Board of Children's Guardians, Associated Charities or the Orphans' Home.

XVII. There is no department of Child Hygiene in our state.

XIX. Child hygiene is taught in our public schools by the teachers and physicians. It is taught in all grades above the fourth.

XX. Our organization is the only one in the city engaged in baby-saving work.

XXV. Our budget for the year 1915 was \$1,780. This amount was raised for us by The Federation of Social Service, which makes an annual campaign for funds for all the charitable organizations in the city.

XXVI. We give instruction to the under-graduate nurses of the hospital.

CHAS. E. HANSEL, M. D., *Medical Director.*

KANSAS

CHRISTIAN SERVICE LEAGUE OF AMERICA

Wichita

I-II. The Christian Service League was organized in November, 1906, incorporated in May, 1908, and has been conducted continuously, without intermission since November, 1906. The Christian Service League is a state-wide organization. The work is divided into departments. Our work in behalf of infants is chiefly with the wards of the League, and babies whose mothers have placed them with us temporarily, to be cared for by our nurses, while they work to sustain them.

III. The number of babies cared for
 during the year ending October 1, 1915.....61
 during the year ending October 1, 1914.....48
 during the year ending October 1, 1913.....34

V. Doctors on our staff
 during the year ending October 1, 1915.....13
 during the year ending October 1, 1914.....12
 during the year ending October 1, 1913.....10

Nurses on our staff
 during the year ending October 1, 1915.....3
 during the year ending October 1, 1914.....6
 during the year ending October 1, 1913.....5

VII. Our work is chiefly postnatal.

XI. Mothers are cared for by nurses, who are in the employ of the League, under the supervision and direction of our physicians. We have no obstetrical nurses on our staff.

XII. The distinguishing feature of our postnatal work is the care of wards, who have been placed in our keeping by order of the Court, or by their parents. We care for a considerable number of babies, whose mothers are unable to provide for them. We have no age limit, except that we do not receive babies during the first month of life, unless it be in cases of extreme necessity. Such cases include foundlings, babies whose mothers have died, or whose mothers are physically unable to nurse the child.

XIII. There is no hospital for babies in this city. We have no direct relation with any, elsewhere. We are taking steps to build a hospital nursery for babies, which will be maintained and conducted by the Christian Service League.

XV. Homeless babies are placed in the care of our nurses, in their homes, until suitable foster-homes are found for them. They are then placed temporarily, in foster-homes, awaiting our final approval for adoption; after we are fully convinced that we have made no mistake in selecting the home, we consent to legal adoption in the Court.

XVI. In boarding out babies we do not always follow "the one child per home system." For instance, we have one home where two experienced women and one younger woman give almost their entire time to the care of our babies. We have found it better to trust three and sometimes four babies to their care than to the care of some new and inexperienced nurse. There has not been a month during the last year during which they have not received at least one very young baby for us. None have died and all are in a healthy condition at the present, except one who is not sick, but apparently somewhat abnormal.

XXV. Our expenditures for the past year amounted to \$10,369.71. Our budget for the coming year will amount to about \$12,000.00. Our funds are raised chiefly by membership fees and contributions secured from personal interviews.

XXVI. Our work is carried on in many rural communities, in the same manner as it is carried on in the city, with the exception that the babies are brought here for care and treatment.

We have had in our care and keeping during the last year 61 babies under one year of age. All of these babies were bottle-fed, and cared for by our nurses, under the supervision of one of the physicians on our staff. Fifty were homeless babies for adoption, and 11 were boarded for their mothers. Of the 50 homeless babies over 80 per cent were illegitimate. None of them have died, all are well and in average good health.

G. L. HOSFORD, *General Superintendent.*

KENTUCKY

BABY MILK SUPPLY ASSOCIATION

Lexington

Organized June 1, 1914. Work is carried on all the year. Forty-five babies were cared for during the year ending October, 1914. Ninety-five babies were cared for during the year ending October, 1915. Staff consists of two doctors, two graduate nurses and an assistant. Routine consists of daily visits to the homes, instructing the mothers in preparing the milk according to the formula prescribed by the doctors and trying to impress on them the importance of feeding the babies as the doctors prescribe, also the importance of cleanliness in the home. Whole milk is given to the older children, the age limit being from two weeks to three years. Babies too sick to be cared for at home are sent to the hospital. The homeless children are cared for at the Children's Home. Child hygiene is taught by the teachers in the public schools in all grades. Our organization is the only one in the city for baby-saving work. Prenatal work has been added this year. Last year the milk was modified in the laboratory at the Milk Station. This year home modification has been taught.

The annual budget is \$1,200.00 from the city, annual subscriptions, annual entertainment for benefit of association. No rural work is carried on under the supervision of our organization.

Prenatal work was added to the Baby's Milk Supply Association July 1, 1915. One graduate nurse employed. Cases are reported by Associated Charities and Public Health workers. Routine consists of semi-weekly visits, giving instructions as to diet, hygiene of pregnancy and preparation for confinement. After delivery the nurse makes one or two visits daily, as necessary, and renders proper attention to both mother and child for ten days or two weeks. Maternity cases are looked after by city physicians. After case is discharged by doctor it is turned over to nurse on Baby Milk Supply. Beginning July 1st, twenty-eight cases have been under observation, eighteen of which have been delivered, with as yet no death of either mother or child. All are breast-fed. Before cases are given up mothers are instructed as to proper postnatal care of baby. If no provision can be made for confinement in the home, patients are sent to hospital.

MARGARET LYNCH, R. N.,
NANCY BALLARD, R. N.
Nurses in Charge.

BABIES' MILK FUND ASSOCIATION

Louisville

- I-II. Organized in 1908; the work is carried on all the year round.
- III. Number of babies cared for during the year ending
October 1, 1915.....1,209
October 1, 1914.....1,245
October 1, 1913.....1,008
- IV. Number mothers.....893
American 91. per cent Negro 10. per cent
German 3.9 per cent
Irish 1.8 per cent
Italian 1.2 per cent
Jewish 1.2 per cent
Hungarian 0.3 per cent
Syrian 0.6 per cent
- V. Doctors on staff during year ending October 1, 1915.....8
October 1, 1914.....7
October 1, 1913.....7
Nurses on staff during year ending October 1, 1915.....7
October 1, 1914.....7
October 1, 1913.....6
- VI. Infant death rate in Louisville, 1914.....12.1 per cent
1910.....14.8 per cent
- VII.
1909—6 Infant Welfare Stations—open 5 summer months
6 Nurses
Modifying Laboratory
1910—7 Infant Welfare Stations—open 5 summer months.
7 Nurses
Modifying Laboratory

- 4 Nurses and Supervising Nurse
- 1911—4 Infant Welfare Stations—open all year
Modifying Laboratory
- 1912—4 Infant Welfare Stations—open all year
4 Nurses and Supervising Nurse
Modifying Laboratory and Home Modification
- 1913—5 Infant Welfare Stations—open all year
5 Nurses and Supervising Nurse. 1 Nurse-at-large
Home Modification
- 1914—5 Infant Welfare Stations—open all year
5 Nurses and Supervising Nurse. 1 Nurse-at-large
1 Prenatal Nurse
Obstetrical Clinic
- 1915—6 Infant Welfare Stations—open all year
6 Nurses and Supervising Nurse
1 Nurse-at-large
1 Prenatal Nurse
Obstetrical Clinic

PRENATAL

- VIII. a. Prenatal work was started in 1913
 b. Total enrollment, 157
 c. Sent by Associated Charities, District Nurse Association, City Physicians, Settlements
 d. Instruction at Clinic by Staff Physicians, in home by nurse
 e. Average length of time under care, four months

IX. Accurate figures can not be given, but the most conspicuous effect has been the growing demand for skilled obstetrical care among women who previously employed midwives or called any physician available when labor began; a marked increase in breast feeding.

X. No direct relations with hospitals.

XI. Mothers are delivered at home by Staff Physician assisted by Senior Students from Medical Department of University of Louisville and nurse. The prenatal nurse assists at delivery and gives nursing care until recovery. Upon request of the clinic a caretaker is provided by the Associated Charities if no relative or neighbor is available.

POSTNATAL

XII. Intensive home instruction, weekly instructive conference with doctors at the Welfare Station. Nursing care to three years, instructive supervision to five years.

XIII. No direct relations with hospitals. The Children's Free Hospital accepts all cases recommended for hospital care.

XIV. All cases of ophthalmia discovered are sent to City Hospital for treatment and reported to Department of Health. The accepted method of prophylaxis is followed in the obstetrical clinic.

XV. Homeless babies may be committed through the Juvenile Court to Kentucky Children's Home Society for placing; temporary care for infants is offered by the Home of the Innocents, an institution operated by the Episcopal churches of Louisville. When babies are boarded out, an effort is made to have "one child per home," although in some instances satisfaction has been given with two in one home.

XVI. Many children remaining under our supervision to the five-year limit come immediately under observation of school nurses in kindergartens of the public schools.

XVII. No Department of Child Hygiene.

XVIII. No definite change in policy has resulted.

XIX. Courses in home-making have been introduced this year by the Board of Education in the Continuation School.

XX. The Babies' Milk Fund Association is the only organization doing baby-saving work in Louisville.

XXI. No organized effort to instruct father. Excellent results have been obtained whenever there was personal effort made by a doctor to instruct fathers or to gain cooperation individually.

XXII. Milk is no longer handled at the stations. Dairies located in easy proximity to the stations sell certified milk at less than the usual retail price. Milk tickets are given by the Milk Fund Association to those unable to procure proper milk for their babies.

XXIII. The work is all done by doctors and nurses.

XXIV. The Executive Committee is responsible for the entire policy of the organization.

XXV. Budget for 1915 about \$12,000. Appropriations from city and county; annual contributions.

XXVI. a. A movement is now under way whereby nurses in training may receive instruction and experience in the field in baby-saving work in connection with stations of Milk Fund.

b. No rural work is being done under the supervision of the Babies' Milk Fund Association.

GAVIN S. FULTON, M. D., *Medical Director.*

ELISABETH SHAVER, R. N., *Supervising Nurse.*

MARYLAND

MARYLAND ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY

(Babies' Milk Fund Association)

Baltimore

In the year 1879, the Thomas Wilson Sanitarium, a summer hospital for babies, was founded by the late Thomas Wilson. This sanitarium, ideally situated at Mt. Wilson about 10 miles northwest from Baltimore, is open during the three summer months, and babies suffering from gastro-intestinal diseases are sent there for treatment.

An unusual feature of this institution is that the baby's mother is able to go with it, and stay during the entire illness of the child, and the benefits she derives from the instructions given during her stay, as to the proper care of the child are incalculable. Unfortunately, under the original plan of the organization, the baby had to be returned to the hot city and the bad milk; and despite the benefits derived from the stay at the sanitarium, death frequently resulted.

Realizing this, and in order to overcome it in a measure, in 1904 the trustees of the Thomas Wilson Sanitarium established four milk stations in widely separated parts of the city. Later, in order to meet the increasing demands at the stations, the Babies' Milk Fund Association was incorporated, and an appeal was made to the public of Baltimore for support, the sanitarium, however, continuing to be a large contributor.

In 1911 the number of laboratory modifications dispensed at the stations was reduced and whole milk substituted. The mothers were then instructed in their own homes how to prepare it according to the formula. At the same time welfare clinics for the prevention of illness of babies were opened.

*In this same year, 1911, through the courtesy of the Johns Hopkins Obstetrical Department, we were given the names of all the mothers delivered by that department, and each of these babies was followed regularly for one year. Following this experiment, in 1912 the Johns Hopkins, the Mercy, the Maryland General and the University Hospitals, inaugurated the system of giving to us regularly the names of mothers who register with them prenatally, as well as the delivered cases.

In August, 1914, at Locust Point, we opened our first obstetrical station. In this district topographical conditions cut it off from the main part of the city, and as the people are mostly foreign born, and for many generations have depended on the midwife, we encountered some difficulty, but at the end of 18 months, we have 61 prenatal cases registered to our credit, and the results have been so gratifying that we are about to establish a second clinic in another section of the city.

Our object is to educate the mothers to the realization of what better obstetrics means to both herself and child, and we hope in time to have them willing to enter the hospitals. In all cases we are most careful to guard the private physician's interests, and the patients we receive are unable to pay their fee.

We consider our latest development however, is one of the most important we have yet undertaken, for with the permission of the Health Department, the nurses offer their services to the mothers of all registered babies with the consent of their physicians. We feel that the visit of a skillful nurse, within the first few weeks of an infant's life, will do much towards reducing the infant mortality of the city.

The growth of the work of the association during the past few years has been remarkable.

We are at present conducting 16 weekly clinics in different parts of the city and expect to open two additional ones within the next month. These clinics are conducted by a physician and nurse and the babies are weighed and examined with a careful record kept of their condition. If the baby is found in need of medical attention, it is sent back to its own physician, or if the parents are unable to afford a fee, to a nearby baby dispensary. These clinics are not conducted, either as a "better baby contest," or as a "mothers' meeting," as we offer neither prizes nor refreshments, but the mothers themselves are so vitally interested in the development of their babies, that it is something very uncommon that will keep them away.

During the past year 11,311 visits were paid by babies to these clinics, and of this number only 1,108 were visits of sick babies.

In the prenatal department of our work, 1,376 cases have been registered during the past twelve months. These cases are visited at once by the nurse, who sees that the expectant mother returns to the hospital at stated times for examination, and also instructs her in preparation, general hygiene, etc., and the visits are continued until parturition. In these cases we give no obstetrical aid, but the visits are resumed when the baby is ten days old (except in cases of emergency). The baby is weighed and followed until it reaches its first year, and then, if the baby is in normal condition, the weighing visits are discontinued, but the mothers keep in touch with the station until it is three years of age.

At our Locust Point obstetrical clinic, however, an exception is made to this rule, as prenatal visits are made every ten days to the expectant mother by the nurse, with careful examinations by the physician, the patients being delivered in their home.

* This report deals especially with items VIII-XII. in the suggested outline, pages 365-367.

During the past twelve months 7,050 babies have been cared for; 45,741 home visits have been made by the nurses; 11,311 visits of babies to the welfare clinics; 1,376 prenatal cases have been followed by a staff consisting of medical director—10 physicians at the 16 welfare clinics—a woman obstetrician, superintendent of nurses—15 registered nurses and 1 trained attendant in the obstetrical department. We also have 3 additional registered nurses during June, July and August.

The budget of the Babies' Milk Fund Association amounts to about \$25,000 annually, and is provided for as follows: \$3,800 appropriation by the Thomas Wilson Sanitarium; \$1,000 for support of a welfare station by the ladies of Roland Park; \$1,000 for support of a welfare station by the Scottish Rite Masons.

The balance is raised through the summer campaign of *The Sun* and *The Evening Sun*, and by voluntary contributions.

J. H. M. KNOX, JR., *Medical Director*

M. FRANCES ETCHBERGER, *Superintendent of Nurses*

GEORGE R. THACKER, *Extension Secretary*

COUNCIL MILK AND ICE FUND

Baltimore

Council Milk and Ice Fund (Inc.) Organized 1895.

Object: Care of the infant; aged and sick poor; to instruct the mothers in the welfare of the home; and to educate them to use only pure milk.

During the past twelve months we have distributed 145,952 quarts of milk independent of that given in modified form.

We require that all babies assisted by us be brought to the clinics of the Babies' Milk Fund Association, where the nurses keep a record of the weight, and the mother is instructed as to its care and feeding.

All cases of pregnancy are noted and the expectant mother advised to register at a maternity hospital. Employment of midwives is always discouraged. Whenever possible, breast feeding is insisted upon, and we keep in constant touch with all our charges.

MRS. ISADORE ASH, *President*

BABY WELFARE SECTION OF THE CIVIC CLUB

Cumberland

The Baby Welfare Section of the Cumberland Civic Club was organized February 11, 1913. Our work is carried on all the year round. Fifteen babies were cared for during the season ending October 1, 1915. During 1914 the number cared for was thirteen; during 1913 the number was twelve.

About sixteen mothers have been visited by us and received aid of both milk, ice and clothing. These families were Americans, with exception of one Slavic family.

One doctor devoted his time especially to our work. No nurse has as yet been employed.

The babies under our care are from one to three years old. We make no provision whatever for homeless babies. We have no Department of Child Hygiene. We have had no definite cooperation with the Board of Health.

Infant Child Hygiene has not been introduced into our public schools. Courses in domestic science and domestic art are taught regularly in our public schools. Ours is the only organization devoted to baby saving in our city.

The duties of our section are to raise funds and investigate cases of need, and supply milk and ice as required. In addition, medical aid has been provided in a number of instances.

Our funds are raised by voluntary contributions and entertainments. We have no appropriation from city or state. On July the first, four dozen milk bottles were placed in various stores and offices for voluntary contributions, bearing a placard "Do It For the Babies! You Were a Baby Once." By this means the sum of \$115.00 was collected between July and September.

MRS. WM. THOMPSON, *Chairman*

MASSACHUSETTS

BABIES' HOSPITAL

Boston

I.-II. Organized 1868. Work carried on all the year round.

III. Number of babies cared for
 during the year ending October 1, 1915.....176
 during the year ending October 1, 1914.....285
 during the year ending October 1, 1913.....380

IV. Number of mothers reached during the year ending October 1, 1915, 183. Nationalities represented: Irish, Hebrew, English, French, Polish, Greek, Syrian, Scotch, Swede, Finn, Austrian, Cuban, Norwegian, American.

V. Staff

	Doctors	Nurses
1915	1 supervisor and many assistants	3 visiting, besides hospital staff
1914	3	3
1913	3	3

VI. Infant death rate in Boston, 1914..... 103.12
 1910..... 126.72

XII.-XIII.-XV. The age limit of our babies is two years. They are boarded out under our care, under close medical supervision. We follow the "one child per home" plan unless there are exceptional cases, which seldom occurs. We never have more than two in one home.

XXV. Budget, \$25,000. Funds are raised by special appeals and annual subscriptions.

INSTRUCTIVE DISTRICT NURSING ASSOCIATION

Boston

We have made at 10-day intervals—

January 1 to October 1, 1914.....5,247 prenatal visits
 January 1 to October 1, 1915.....6,696 prenatal visits

We have nursed in 1915—

	Children, under 10 years		Children under 2 years	
	Cases	Deaths	Cases	Deaths
Measles	266	1	63	2
Whooping cough	95	..	56	5
Bronchitis	131	..	113	1
Pneumonia	164	9	129	22
Diarrhea and enteritis..	63	2	89	12

October 1, 1915, enrolled for post-graduate theoretical and practical training in the principles of the new public health nursing

Course, four months..... 27

Course, full academic year, Simmons College, School for Social Workers 11

38

NATIONALITY REPORT—15 BUREAU OF CHILD HYGIENE DISPENSARIES

Total new cases.....3,367

355 of this total are Jewish (of different nationalities)

447 of this total are Italian

402 of this total are Hungarian

291 of this total are Polish

258 of this total are German

214 of this total are Slovak

163 of this total are Bohemian

131 of this total are American

76 of this total are English

1,030 of this total are patients of the following nationalities:

Griner, Austrian, Scotch, Lithuanian, Irish, Welsh, Croatian, Colored, Chinese, Corsican, Russian, Roumanian, French, Greek, Canadian, Servian, Danish, Swedish, Holland, Syrian, Finnish, Portuguese, Norwegian and Indian.

MARY BEARD, R. N., *Director*.

MASSACHUSETTS MILK CONSUMERS' ASSOCIATION

Boston

In our legislative program for 1914-1915 we adopted a new policy of co-operating with and working through other associations.

We supported the Bill introduced by the Massachusetts Medical Society adding a penalty clause to the law authorizing the State Department of Health to pass regulations. In the reorganization of the State Department of Health Governor Walsh did not insist upon providing that there should be a penalty for violating the regulations, hence the general regulations of the State Department of Health are of no value because they are unenforcible. The medical societies Bill to remedy this defect was defeated.

We also cooperated with Mayor James M. Curley, of Boston, in an effort to secure \$35,000 for the inspection of out-of-state dairies. Two-thirds of the milk consumed in Massachusetts comes from outside the state, and the milk from one dairy, in the course of distribution, may go into many cities. Boston and Brookline are almost the only municipalities that undertake the inspection of out-of-state dairies, with the result that these farms are inspected only to a limited degree and most of the expense falls on the city of Boston. It is perfectly obvious that the State Department of Health should do this work for all in order to avoid duplication and to secure efficiency and economy. At one time the leaders of the Grange were inclined to favor the Bill, but they changed their minds and the Bill was defeated.

Most of our time, however, was devoted to supporting the Bill of the Labor Unions, the Labor Clean Milk Bill, making it illegal to sell milk handled under insanitary conditions; providing penalties and equity jurisdiction for its enforcement; and also that no one should be prosecuted until after he had received a warning notice. This Bill was designed chiefly to give the State Department of Health the legal authority to control out-of-state milk. The Governor vetoed the Bill for political reasons. As a result of the veto it is still true in Massachusetts that our State Department of Health does not have the legal power to stop the sale of milk from a dirty place, however filthy it may be.

This Bill was introduced in the Legislature by the State Branch of the American Federation of Labor as a result of a vote at the Annual State Convention of the Federation. It was reported favorably by the Committee on Public Health and passed both Houses by a two-thirds vote. The Governor's veto of the Bill was sent to the Senate where a majority voted to over-ride the veto, but as the necessary two-thirds vote was not secured the Bill was defeated. This year's campaign touched the high-water mark in our five years of effort to remedy these serious defects in our Massachusetts Health laws.

In the course of the campaign we sent out 7,200 postal cards, 15,000 circulars, 19,000 copies of the Bill, and 38,000 letters. Of these letters 4,000 were sent out at our expense for the State Branch of the American Federation of Labor, 2,000 for the Massachusetts Federation of Women's Clubs, 1,000 for the Milk and Baby Hygiene Association, 3,400 for the Massachusetts Medical Society, 680 for the Massachusetts Anti-Tuberculosis League, and 240 for the Massachusetts Civic League.

The infant mortality rate for Massachusetts for the year 1914 was 104.56, a substantial reduction from 110.6 of the year before. It is still, however, much higher than the infant mortality rate for congested New York City, which, for the year 1914 was 94. It is even higher than that of Boston, which for the year 1914 was 103.4.

There were 372 less deaths below the age of one year in 1914 than in 1913, although there was an increase in births for the year ending June 30, 1914, of 2,240. We feel that the educational value of our campaign is to a great extent reflected in this reduction, as even our opponents admit the conditions in Massachusetts dairies are better as a result of our campaign.

Our many years of work followed on a request for help by Dr. Charles Harrington, Secretary of the Massachusetts State Board of Health, but Dr. Allan J. McLaughlin, the new State Health Commissioner, refused to help us in our efforts. As a result of the pressure which our campaign brought to bear upon him he instituted a milk inquiry of his own, however, from which we hope some results will follow.

The Chamber of Commerce has also made a valuable report on the milk situation in New England after a very thorough investigation which undoubtedly was instituted in a large measure because of our campaigns.

MRS. WILLIAM LOWELL PUTNAM,
Chairman of Executive Committee.

MILK AND BABY HYGIENE ASSOCIATION

Boston

I-IV-V. The Milk and Baby Hygiene Association, 296 Boylston Street, Boston was organized in 1909 and incorporated in 1910. Its work is carried on all the year round. Statistics for the last three years are as follows:

Babies cared for during the year ending October 1, 1915.....4,679

Babies cared for during the year ending October 1, 1914.....4,172

Babies cared for during the year ending October 1, 1913.....3,716

Approximately the same number of mothers were given advice in baby hygiene by the physicians and nurses of the association during these periods. The nationalities of babies represented in 1914 were:

American *	635	Dutch	4
Irish	412	Swedish	39
Irish (American)	339	Norwegian	3
Irish (Canadian)	1	Danish	2
Jewish (American)	120	Swiss	2
Jewish (Russian)	774	Spanish	1
Jewish (German)	1	Portuguese	16
Jewish (English)	2	Austrian	18
Jewish (Galician)	1	Hungarian	7
Canadian	78	Galician	4
Colored	64	Lithuanian	6
Russian	64	Greek	41
Polish	62	Armenian	14
Italian	1,047	Syrian	173
English	49	Hawaiian	1
Scotch	41	Newfoundlander	3
Belgian	6	Panama	1
French	11	Roumanian	1
French (Canadian)	8	Chinese	2
German	35		
			4,097

* These statistics were based on the birth-place of the father.

V. The size of the medical and nursing staff has been as follows:

during the year ending October 1, 1915.....	23 doctors	15 nurses
during the year ending October 1, 1914.....	15 doctors	14 nurses
during the year ending October 1, 1913.....	14 doctors	13 nurses

VI. The Boston infant death rate for the year ending December 31, 1914, was 103 per 1,000 births; for 1910 was 129.

XII.-XIII. The Milk and Baby Hygiene Association, which has confined its work almost entirely to the postnatal care of babies, supervised 738 infants in 1909. During the next year 1870 babies were under its care and year by year the number of babies the association has tried to *keep well* has grown, until for the year ending October 1, 1915, 4,679 babies were under supervision. This means that the association is giving supervision to nearly 25 per cent of all the babies in Boston during their first year. The number of baby health or "milk" stations maintained by the association has increased to twelve. In three of these the number of babies registered is so large that two nurses are required for their care. Inspected, pasteurized milk is distributed at cost from the stations daily from 8 to 9 o'clock. Baby conferences or "well baby clinics" are held twice a week in four stations and once a week in the remaining eight. The volunteer medical service is provided in most cases from the pediatric clinics of the five large hospitals in Boston which specialize in children's diseases. In many cases this means that the *same physician* sees the baby when well at the milk station and when sick at his hospital clinic, and of course, vice versa. The attendance of babies at the baby conferences and the number of home visits made by nurses for the last year has been:

	1910	1911	1912	1913	1914
Attendance at Conference....	10,847	10,972	11,451	13,754	19,578
Home Visits	28,605	32,156	38,659	41,945	50,275

Four features distinguish the work of the Association: (1) The high percentage of breast-fed babies. Fifty-two per cent of the babies are entirely breast-fed and twenty-two per cent partly breast-fed. (2) The large number of home modifications. Only three per cent of the entire weekly registration of babies are supplied by laboratory modifications. Thirty-one per cent are on home modifications. (3) The unusually good medical and nursing supervision provided by the Association. All the physicians are child specialists, and the nurses must have had courses in infant care and social work in addition to regular hospital training. (4) The large number of mothers who bring their babies to the milk stations without the influence of any outside agency. For the last two years 40 per cent of the entire number of babies were referred by their mothers or the relatives and friends of the family. Owing to the present pressure upon the nursing staff babies are discharged from the stations usually before they are eighteen months old.

XIV. Cases of eye trouble are referred at once to the Massachusetts Charitable Eye and Ear Infirmary.

XV. Homeless babies are referred to other organizations which are equipped to carry on this type of work.

XVI. Some of these babies are practically lost to us. Many, however, return for weights and advice, even though the nurse does not visit in the homes, while a large number have very small brothers or sisters and are still seen frequently when the little ones are visited.

XVII. The department of Child Hygiene of the Boston Board of Health employs 13 nurses who visit the homes of all new-born babies. Reports as to feeding and general condition are made to the Director of the Department. An effort is made to supervise the babies until they are registered with one of the milk stations maintained by the Milk and Baby Hygiene Association. Last year 18½ per cent of all babies supervised by the Association were referred by the nurses of the Department of Child Hygiene.

XIX. Infant or child hygiene is not taught in any public school in Boston. In some schools there are courses in home-making.

XX. The Milk and Baby Hygiene Association is the only organization in Boston which maintains baby welfare or "milk" stations for the prevention of infant mortality.

XXI. The Association has no organized work for the special instruction of fathers. During the last six months our medical staff has been reorganized and enlarged so that at each station there are one or more assistant conference physicians associated with the doctors who have charge of each clinic.

XXII. The work has grown over 20 per cent during the current year. In spite of hard times and war relief appeals our contributions have steadily grown. In May the last part of a note of some years' standing was paid; the Association is now entirely out of debt and recently received the first gift toward its endowment, the sum of \$10,000.

XXIII. Volunteer workers assist in weighing the babies and in other ways at conferences. Under the chairmanship of a member of the Board of Trustees a Ladies' Volunteer Committee endeavors to supply two of its members to help the nurses in baby clinic hours at each station.

XXIV. The Board of Trustees (of 17 persons) makes all appointments to the staff of the Association upon recommendation from its executive committee of five. Questions of medical policy are considered after recommendation from the Medical Advisory Committee.

XXV. The annual budget of \$25,000 is raised by annual subscriptions and special appeals. The Association receives no appropriation from the city or state.

GEORGE R. BEDINGER, *Director*

**THE PRENATAL AND OBSTETRICAL COMMITTEE
of the
WOMEN'S MUNICIPAL LEAGUE**

Boston

VIII. The Prenatal and Obstetrical Committee of the Women's Municipal League, formed for the purpose of raising the standard of obstetrical care, is now carrying on three clinics.

One at the Peter Bent Brigham Hospital, near the Harvard Medical School.

One at the Maverick Dispensary, in East Boston.

One at the Cambridge Neighborhood House, in Cambridge.

(b) The number of patients cared for during the past year has been 145. Many of these are sent to us by out-patient clinics and public health nurses, and others are old patients who have returned a second time for our care.

Our staff has increased to three obstetricians. All nursing is done for us under the supervision of our chief obstetrician by the Instructive District Nursing Association.

(e) The patients are under our care for varying lengths of time, but we encourage as early application as possible, and a considerable number, coming to learn whether they are pregnant, stay under our care for six or seven months.

IX. The work has had decided effect in reducing the percentage of deaths during the first month of life, in reducing the number of stillbirths, and in increasing breast feeding. It has also stimulated the local practitioners to better care at childbirth, and in some cases even to giving prenatal care as well, and we hope it has had some effect in increasing the demand for skilled obstetrical care in the city.

XI. The care of mothers during confinement is given by obstetrically trained graduate physicians at five dollars (\$5.00) a case. The nursing care of the patient in the home is given by the visiting nurses of the Instructive District Nursing Association. The charge for nursing, including the clinics, is also five dollars (\$5.00) per patient, making a total of ten dollars (\$10.00) a case.

XIV. For the prevention of blindness we use AgNO₃, as required and provided by the State Board of Health. Any suspicious cases are referred to the hospital and the Board of Health.

XVII. The City of Boston has a Department of Child Hygiene and we have every reason to believe that the prenatal care given by it is owing to that of this Committee. They often refer obstetrical cases to us for care.

XX. Duplication of work between us and other agencies is guarded against by districting the city in a general way—for we are trying to fill the gaps left by the other agencies and to avoid overlapping.

XXI. Instruction is given to the fathers by individual nurses, but we are not doing this work yet as we hope to later, for we believe that if the fathers were encouraged to cooperate much more than is usually the case the whole standard of home life would be greatly improved.

XXII. We have hitherto confined our patients to those who could pay \$10 for care (or for whom some friend or organization would pay) from the moment of application—as early as possible in their pregnancy—throughout the puerperium, because we believe that many patients can pay who do not do so, and that work which is paid for is much more valued; besides which, self-supporting work can grow indefinitely, whereas private philanthropy is necessarily limited. But owing to the novelty of the work the attendance at the clinics is smaller than we could accommodate, and in order to spread further the knowledge of the value of skilled care, before, during and after childbirth, we have decided to

make our charges for the present on a sliding scale according to the means of the patient.

XXIII. The character of the work prohibits the employment of volunteers, and we greatly appreciate the cooperation of the Instructive District Nursing Association, the president and director of which are members of this Committee.

Gleams of humor occasionally enliven the clinics. The other day a Greek woman came for examination, bringing with her a friend as interpreter. The doctor, by way of entering into sympathetic relations with his patient, suggested that he had once studied Greek, and asked if she knew Homer. Through her interpreter she replied, with evident regret, that she had been but a short time in Boston.

MRS. WILLIAM LOWELL PUTNAM,
Chairman of the Committee

SOCIETY FOR HELPING DESTITUTE MOTHERS AND INFANTS

Boston

I.-II. Founded 1873. Incorporated 1904.

III. One hundred and eighty-three mothers with babies (*under one year*) were dealt with during the year ending October 1, 1915. These babies do not come into the care of our society in the same sense that babies do in a hospital or child-placing agency, because the baby is usually in the care of its own mother. The cases are investigated and then disposed of according to the needs of the individuals.

IV. One hundred and eighty-three mothers of *infants* under one year were cared for—

American	26	Italian	3
Irish	37	Portuguese	2
Irish-American	30	Jewish	3
English	13	West Indian	1
Canadian	9	Colored	12
French-American	5	Bohemian-American	1
Scotch	10	Scotch-English	2
Scotch-American	1	Scotch-Irish	1
Swedish	2	German	1
Swedish-American	2	German-American	1
Norwegian	1	German-Spanish	1
Finnish	3	French-German	1
Polish	8		
Lithuanian	2	Total	183

V. There are no doctors or nurses on our staff. We have four consulting physicians, and we use the clinics of the out-patient departments of the hospitals, the Milk and Baby Hygiene Association, and the dispensaries.

VI. For the year ending December 30, 1914, the infant death rate in Boston was 103 per thousand births.

For the year ending December 30, 1910, the infant death rate in Boston was 126.77 per thousand births.

VII. We do some prenatal work. At present our work is more postnatal.

VIII. Forty-five pregnant women have been sent to us this year. After investigation these cases were sent to public or private institutions until confinement, or placed at board in a private family by our Society until admitted to

a maternity hospital, and while there were under the supervision of an obstetrical clinic. The mothers come from the community, the public and private organizations, social service departments of the hospitals, and the dispensaries.

X. We cooperate with maternity hospitals and out-patient departments.

XI. Secure their admission to a hospital or maternity home.

XII. Special features of our work are: Personal service, working without an institution. Assisting unmarried mothers as well as married mothers, and keeping mother and child together, where the character of the mother and her love for her child makes it desirable. (We find this so in many cases.)

XV. We do not deal with babies apart from their mothers.

XVII. Boston has a Department of Child Hygiene. Every child born in Boston is supposed to be reported by the attending physician to the Registry of Births within twenty-four hours, with the usual information, such as name, address, name of attending physician.

A copy of the birth records received is sent daily to the Department of Child Hygiene. There a card is made out and filed by wards. This department has fourteen nurses, who visit the new-born baby and report in a regular form as to the conditions found, and whether the child is breast-fed or bottle-fed. If necessary, the baby is sent to the clinic at the Milk and Baby Hygiene Station, or in case of need the baby is reported to one of the various activities that are being carried on in the city. The city is making a great effort to keep babies well and thus reduce infant mortality. On account of the lack of nurses to cover the cases, they are now only planning to follow the child until it is one year old. It is hoped that in the future they may be able to keep in touch with the child until it goes into the care of the school nurse.

XIX. Infant hygiene is not taught directly in the public schools. There is no course for children, but through the school centers arrangements are now being made for a course in infant and child hygiene, to be given to mothers.

There are courses in home-making given in the schools in Boston in grades seven and eight.

XX. There are many other organizations dealing with babies. Overlapping is prevented by the use of the Confidential Exchange and cooperation.

XXIV. Our Council, equivalent to Board of Managers, meets every month, except during the summer. Our agent meets the Council and reports cases and consults with the Council about them; also a committee meets at the headquarters with Miss Locke every week for more constant and thorough consideration of cases. During the summer Miss Locke can consult with the secretary on any emergency, and sometimes with other members of the Council.

XXV. Our budget is about \$6,000. Funds are raised by special appeals and by annual subscriptions.

MISS L. FREEMAN CLARKE, *Secretary*.
MISS E. M. LOCKE, *Agent*

INFANT HYGIENE ASSOCIATION

Holyoke

I-II. Organized in April, 1911. Incorporated under the laws of the State of Massachusetts February 2, 1914.

III. Number of babies cared for

during the year ending October 1, 1915.....330

during the year ending October 1, 1914.....335

during the year ending October 1, 1913.....309

IV. Number of mothers reached during the year ending October 1, 1915—practically all whose babies have been under our care.

Nationalities represented are as follows, in the order of their frequency: Irish, American, French, Hebrew (Russian Jews), Polish, German, Greek, Italian, Scotch, English, Armenian.

V. Doctors on the staff:

During the year ending October 1, 1915....1 medical director
2 station physicians
During the year ending October 1, 1914....1 medical director
1 station physician
During the year ending October 1, 1913....1 medical director
1 station physician

In addition to the above there are 7 physicians on the board of directors and on the different committees.

Nurses on the staff:

During the year ending October 1, 1915....1 graduate nurse and three trained assistants,
During the year ending October 1, 1914....2 graduate nurses and two trained assistants,
During the year ending October 1, 1913....1 graduate nurse and two trained assistants.

VI. Infant death rate during the years 1910 to 1915, inclusive, from October 1 to October 1:

Mortality rate (per 1,000 infants born) of infants under 1 year)

Year Ending October 1	Including out-of-town infants dying at the Brightside Institution*	Excluding the out-of-town infants dying at the Brightside Institution
1915.....	170	102.
1914.....	147	114.
1913.....	188	123.
1912.....	155	113.
1911.....	194	147.
1910.....	203	142.

*At this institution infants are received from all over the state and as such it seems only fair to note the fact in interpreting the death rate of infants in Holyoke.

The number of births in Holyoke for the past few years has been about 1,700. The population of the city is between 60,000 and 65,000. The city is one having a very large percentage of its population employed in its paper, cloth, thread and metal working mills.

VII. The work began with the establishment of a central milk station, from which milk, modified according to the physician's orders, was sent to three different drug stores, which acted, gratis, as substations for the delivery of the milk to the patients. One nurse and one assistant were employed. Ten patients were supplied the first month.

At present we have a larger central station, at 34 Sargeant Street, with five drug-store substations and one restaurant, which still act gratis; one graduate nurse who acts as general supervisor of the work at the station, but who spends most of her time visiting the patients and their mothers at their homes; and three trained assistants to attend to the routine work at the central station.

Our work is chiefly postnatal.

VIII. Prenatal work:

- a. Started in 1914.
- b. Nine mothers instructed and cared for.
- c. Cases reached through the cooperation of the local physicians.

d. Instruction given by a graduate nurse.

e. All the patients but one were well along in pregnancy before being seen.

XI. The mothers have been in some cases induced to go to the local hospitals for confinement, but generally they are confined at home. Usually there is no trained helper to assist the physician. One young mother was despondent and about to commit suicide when seen by the nurse and persuaded to await her full time. A successful confinement and a happy mother and healthy child were the result of the nurse's work.

XII. Postnatal work. Distinguishing features:

a. Two clinics held weekly. One at the central station as previously, and one at a substation situated in the Polish district. These clinics are held on different days of the week, that the supervising nurse may attend each. A Polish speaking physician has charge of the second of the two clinics, and is aiding us greatly in reaching cases among this part of our population.

Attendance at the clinics is very gratifying, and little difficulty is experienced in getting the mothers to come. Many come to the clinics who are not under the direct care of the association, in order to have their babies weighed week by week. These cases, as well as those who come merely for advice, are not included in the number reported as being "cared for" in question III.

b. The visiting of the supervising nurse at the homes of the patients, where she gives instruction and advice, is perhaps the most important single factor in our work. The fact that only four (4) deaths occurred among the 330 cases cared for during the past year, shows the benefit of such supervision.

c. Special efforts are made to ensure continuance of breast feeding, whenever that may be possible.

d. Home modification of milk is encouraged where, in the opinion of the supervising nurse, it is advisable. For such cases we furnish whole milk.

e. All-the-year round work has been continued from the start. A surprisingly large number of babies are kept under our care through the winter months.

f. Parents pay for the milk. Freedom from the stigma of pauperism is avoided by any means possible. Patient explanation of the relative cost of sick or frail babies as compared with well and strong ones, and of the nearly identical cost of good clean milk, modified and ready to feed the baby, as compared with the cost of poor milk plus the cost of material and time necessary for proper modification even when done at home, usually brings the parents to feel willing and glad to pay the full cost of the milk.

In cases where parents cannot pay, the association has a relief fund set aside, and on the recommendation of a physician or someone familiar with the true home conditions and worthiness, part or all of the cost of the milk is borne by the association. In other cases the Association for the Relief and Prevention of Tuberculosis, the Associated Charities, or the Relief Department of the city government bear the expense.

g. No definite age limit for the babies is set. Practically all are under two years.

XIII. We have no direct relations with any hospitals for infants.

XIV. We are not carrying on any special organized work for the prevention of blindness in infants. The state through the local Board of Health is making special efforts along this line.

XV. We have no means for giving special care to homeless babies.

XVI. The supervising nurse from time to time follows up cases graduated from the clinics, but there is no special work done along this line.

XVII. There is no Department of Child Hygiene maintained by the city.

XVIII. The Board of Health is in hearty sympathy with our work, and renders what assistance it can in cases we are not able to care for completely.

XIX. During the past year there have been classes on Child Hygiene given at the Vocational School. These classes met twice a week, in the evening, from October to March. Practical demonstrations and instruction in the care of the child, including the preparation of its food, were a part of the course. Our supervising nurse acted as the instructor of this class, and the class was given its instruction and demonstrations on the preparation of the baby's food at the central milk station of our association.

The work proved so successful that many had to be turned away, and the course is to be repeated the coming year. The course was given with the approval of the State Committee on Vocational School work. The work of this course was shown as a part of exhibit sent by the Holyoke Vocational School in the Massachusetts exhibit of Vocational School work given at the San Francisco Exposition.

XX. This association is the only one engaged in infant hygiene in this city.

XXI. No special effort is made to reach the fathers.

XXII. The establishment of a second weekly clinic for the Polish mothers; the beginning of prenatal work; the more thorough follow-up work in visiting the babies; the sending of pamphlets on infant care to every mother as soon as the birth of her child is reported; the establishment of a modern pasteurizing plant, where milk is pasteurized at a temperature of 140 degrees F. for 35 minutes, and then cooled by the double coil system in a very brief time; and the installation of mechanical conveniences at the station for the promotion of rapid and better handling of milk and utensils, constitute the changes in our work during the past year.

XXIII. The volunteer workers of the association comprise (1) the officers—president, secretary, treasurer, two vice-presidents, medical director, station physicians (2)—board of directors (consisting of at least 18 members, from whom the officers of the association are chosen), medical committee, advisory committee, business committee, publicity and printing committee, and a relief committee, which committees are chosen at the annual meeting of the members of the corporation held in November.

XXIV. The duties of the Board of Directors are to meet on the second Wednesday of each month and at such meetings to hear all reports from committees, officers of the Association and the supervising nurse, who must report each month: to approve all bills, sanction expenditures, appoint all committees and attend to any other business of the association.

XXV. The annual budget has been \$3,000. This is appropriated entirely by the city.

FRED. H. ALLEN, M. D., *Medical Director.*

BABY FEEDING ASSOCIATION

Springfield

I-II. Our organization was started in the summer of 1910. The work is carried on throughout the year.

III. The number of babies cared for during the year ending October 1, 1915, was 284; during the year ending October 1, 1914, 223; during the year ending October 1, 1913, 221.

IV. The nationalities represented are chiefly Jewish and Italian with a small number of French, Scotch, Irish, American, Greek and Syrian.

V. The medical part of our work has been attended to by our medical director, usually assisted by four other physicians.

Our nursing staff consists of graduate nurse, an assistant practical nurse and a helper.

VI. The infant death rate in our city

for the year ending December 30, 1914 was 96.8 per 1,000 births.

for the year ending December 30, 1910, was 123.67 per 1,000 births.

VII. Our organization was started in the summer of 1910 with one milk depot and one graduate nurse. Our work was chiefly confined to the distribution of modified milk put up in feeding bottles at the milk depot and called for by the parents; also visits to the homes by the nurse and the giving of instructions as to the feeding and hygiene of the baby. Weekly conferences for mothers were held at the milk depot by the physicians.

During the year 1911 we had 119 babies under our care. We also opened a branch delivery station.

In 1912 we had 167 babies under our care and added an assistant nurse.

In 1913 we had 221 babies under our care; also opened a summer camp during the months of July and August. During that time over 100 babies with their mothers attended the camp.

In 1914 we had 223 babies under our care. We started prenatal work and also during the summer started a "Little Mothers' Club," conducted by the nurses. Classes were held once a week. Over 75 girls between the ages of nine and thirteen attended, with an average attendance of 22. A written examination was held at the end of the course and prizes given to the five having the best record. These "Little Mothers" were instructed about the proper methods of clothing, bathing, feeding and the general care of the baby.

During the past year, owing to the disturbed business conditions of the country, some retrenchment was considered advisable. Consequently the summer camp and a second branch delivery station, started last year, were given up. The main work of the association, however, continued to show a gratifying increase, 284 babies being cared for this year.

VIII. Prenatal: The prenatal work, under the care of a special graduate nurse made rapid progress and last winter weekly conferences were started by our physicians.

In order that the prenatal work might reach every part of the city more efficiently, it was considered advisable to place it under the control of the District Nursing Association last spring. Our work at the present time is therefore entirely postnatal.

XII. Postnatal: Our nurse plans to make house-to-house visits at least once a month and as often as necessary if the baby is not doing well. The mothers report at the depot whenever there is any trouble with the babies' digestion. We hold weekly conferences for the mothers with a doctor and a nurse at the central station from April to December. Whenever any of the babies are sick we insist on their securing a physician and remaining under his care. About one-tenth of our babies are breast-fed or part breast-fed. The majority of the babies are weaned before they come to us.

The milk is distributed from the stations in pails with the number of bottles to be used in the twenty-four hours packed in ice. The pails are called for by the mothers each day. Babies remain under our care as long as they are chiefly on a milk diet.

XIII. We have no direct relation with a hospital for babies.

XIV-XVI. We do not carry on any special work for the prevention of blindness and make no provision for the care of homeless babies or the follow-up care of our graduates.

XXIV. The chief duties of our "Board of Managers" are to interest the public in our work and to provide the funds for carrying it out.

XXV. Our annual budget is \$3,500, and our work is supported entirely by private charity.

W. A. HOSLEY, M. D., *Medical Director*.

MICHIGAN

NATIONAL CONFERENCE ON RACE BETTERMENT

Battle Creek

The chief work of the National Conference on Race Betterment during the year has been the maintenance of an exhibit in the Palace of Education, Panama-Pacific International Exposition at San Francisco. This exhibit which occupied one of the most prominent locations in the Palace of Education was opened very shortly after the beginning of the Exposition in January, 1915, and will continue to be open to the public throughout the Exposition. It has been visited by many thousands of people since the opening, the average number of visitors being about 5,000 daily.

The exhibit, through a series of charts and models, depicts the tendencies toward race deterioration and outlines the possibilities of race improvement through the cultivation of simple, biologic living on the part of the individual.

The National Conference on Race Betterment held its second meeting at the Exposition from August 4 to 8. It met at a time when sixty-five other conventions were in session, but none of the others received half the attention from the press and public as that given the Race Betterment meeting. This was due: First, to a broad, popular interest in race betterment, especially in eugenics, and second, to the splendid array of nationally prominent speakers who appeared on the Race Betterment program. Among the speakers were David Starr Jordan, chancellor of Leland Stanford University; Luther Burbank, the eminent scientist of Santa Rosa, California; Paul Popenoe, editor of the *American Journal of Heredity*; Prof. Irving Fisher, of Yale University, and many others of national prominence.

Programs of constructive interest were held twice daily during the four days of the Conference and the meetings were well attended and attracted nation-wide attention from the press.

In connection with the Conference, an imposing morality masque, entitled "Redemption," was staged in the magnificent new civic auditorium in Oakland, two hundred students from the summer school of the University of California taking part. The masque was a dramatic, allegorical arraignment of disease and war and the other enemies of mankind. It depicted the advancement of the race through the ministrations of science and religion and the final victory of mankind over his world-old enemies. More than three thousand people witnessed the masque.

J. H. KELLOGG, M. D., *President*

CHILDREN'S FREE HOSPITAL ASSOCIATION

Detroit

I.-II. The Children's Free Hospital Association, of Detroit, was organized in 1886 to care for the sick children under 12 years of age whose parents are unable to pay for hospital care.

Number of babies under three years of age cared for

1915	1914	1913
737	528	496

Number of doctors on the staff

1915	1914	1913
42	42	37

All ailments of children under 12 years of age, with the exception of contagious diseases, are treated at the hospital. The work of the infants' ward, where children under three years of age are cared for, is largely concerned with feeding. We have the only ward in the city where children suffering from gonorrheal ophthalmia may be treated.

XXV.-XVI. All children needing homes are referred to the Children's Aid Society. The nurses employed by our Social Service Department visit the homes of all patients, reporting the conditions of such homes on special sheets which are placed with the other records of the case. When the patients are discharged they are visited and provision made for further care if necessary.

The babies from the Board of Health clinics are sent to this institution when needing hospital care. Also a Board of Health nurse attends our baby clinic and follows up the babies who come there for treatment.

There are several organizations engaged in baby-saving work in this city. Through report sent to the United Charities Association overlapping of care is prevented.

XXII. Our work has grown considerably during the past year. A new babies' detention ward with special screened beds to prevent contact contagion has been opened. Also our formula room is being enlarged and is now in charge of a trained supervisor.

XXIII. Volunteer workers are utilized in our social service work. They visit homes and carry relief whenever necessary, working under the direction of our social service nurse.

XXIV. The Board of Managers take a very active part in the management of the hospital, meeting once a month, with a meeting of the executive committee every week.

XXV. The hospital budget for this year is \$50,000. Of this \$15,000 is derived from the invested endowment, \$10,000 from the City of Detroit, the remainder being raised by voluntary contributions largely in the form of "beds supported."

BETSEY L. HARRIS, R. N., *Superintendent.*

MINNESOTA

INFANT WELFARE WORK, DULUTH CONSISTORY, SCOTTISH RITE MASONS

Duluth

I.-II. The Infant Welfare work carried on by the Scottish Rite Masons of Duluth was organized in 1911, and is carried on the year round.

III. Number of babies cared for

during year ending October 1, 1915.....	600
during year ending October 1, 1914.....	300
during year ending October 1, 1913.....	200

IV. During the year ending October 1, 1915, have reached six hundred, the nationalities being represented are Swedish, Norwegian, Finnish, French, German, Italian, Austrian, Syrian, Colored and English.

V. Two doctors on staff during summer months of 1915, and one doctor on staff during the summer months of 1914 and 1913.

Two nurses on staff during summer of 1915, and one nurse the whole year round for the years 1915, 1914 and 1913.

VI. Infant death rate in Duluth

for year ending December 31, 1914.....187

for year ending December 31, 1910.....223

VII. Free clinics were held in three districts during months of June, July, August and September, 1915, where babies were weighed and examined, with a physician and nurse in attendance at each clinic. These clinics were held twice a week in each district, making a free clinic every day of the week, excepting Sunday. Milk stations were held at three different districts where whole milk was sold at seven cents a quart. Those unable to pay for the milk received it free of charge.

XII. The age limit of babies under our care is three years.

XIII. We have a ward for sick babies at a local hospital.

XV. The homeless babies are sent to the Children's Home.

XVIII. We cooperate with the Department of Health of the city.

XX. Our organization is the only one engaged in the work of baby-saving in the city.

XXII. Our work was enlarged during the summer of 1915 with one additional doctor and one additional nurse, and two additional milk stations. Little Mothers' Club meetings were held during the summer of 1915 twice a month with an attendance of seventy-six.

XXV. The Scottish Rite Masons of Duluth raise the funds with which to carry on the work.

ELIZ. HEIKKILA, *Consistory Nurse.*

INFANT WELFARE SOCIETY

Minneapolis

I.-II. The Infant Welfare Society, of Minneapolis, was organized in 1910 and reorganized in its present form in June, 1912. Work carried on during the entire year.

III. Babies cared for

during the year ending October 1, 1915.....1,488

during the year ending October 1, 1914..... 764

IV. We have reached approximately 1,400 mothers during the year ending October 1, 1915.

For the year ending December 31, 1914, our 629 new cases were from 22 nationalities:

16.3 per cent American	7.3 per cent Swede
16.2 per cent Jewish	4.3 per cent French
12.5 per cent German	4.1 per cent Finnish
10.9 per cent Norwegian	3.6 per cent Irish
10.1 per cent Polish	3.1 per cent Negro

The other 11.6 per cent was made up of Canadians, Danes, Dutch, English, Hungarian, Italian, Russians, Slovak, Scotch, Swiss, Scandinavians and Syrians.

V. Doctors on staff:

during the year ending October 1, 1915.....5
 during the year ending October 1, 1914.....5
 during the year ending October 1, 1913.....4

Nurses on staff:

during the year ending October 1, 1915.....4
 during the year ending October 1, 1914.....4
 during the year ending October 1, 1913.....3

VI. Infant death rate in Minneapolis:

for the year ending December 31, 1914.....83.2 per 1,000 births
 for the year ending December 31, 1910.....96.0 per 1,000 births

VII-IX. At present our work is very largely postnatal. As our budget grows, we hope to add another nurse who will be able to devote at least a part of her time to the prenatal work. As our nurses come across cases now, they give as much help and attention as they have time for, and direct the cases to the proper places for care.

X. We are in close touch with the Social Service Department of the City Hospital and with the Visiting Nurse Department of the Associated Charities, who report to us their cases as fast as they discharge them.

XI. Our staff does not include obstetrical nurses. If the mother is cared for at home the case is turned over to the visiting nurses who make the necessary plans.

XII. In our postnatal work we conduct eight clinics a week, two at each of our four stations, in charge of baby specialists, under the direction of the Medical Director. Each station has a nurse in charge, who does the follow-up work in the homes and visits cases which are reported to us.

Our work is with children under two years of age.

XIII. We are in close touch and cooperation with the Lymanhurst Children's Hospital and the Northwestern Hospital gives us five free beds. We are also given two at St. Barnabas' and eight in the University Hospital.

XIV. We carry on no special organized work for the prevention of blindness. This work is carried on by other agencies.

XV. The homeless babies are also taken care of by other agencies than ours.

XVI. We are able to make no provision for the follow-up care of the children who are discharged from our clinics.

XVII. There is a Department of Hygiene in connection with the Board of Education. Doctors and nurses are employed by the Board to carry on the work of medical inspection in the schools and occasionally cases are reported to us by the nurses or by the teachers.

XVIII. We are in touch with and have the cooperation of the Health Department of our city.

XIX. There is no regular course of infant hygiene which is taught in our public schools. Courses in domestic science are taught, even in the grade schools, and also in the high schools.

XX. We are the only organization in the city engaged in baby-saving work.

XXII. We have been forced by the growth of our work to limit the districts in which our nurses call and we are trying to make the work center about the clinic more and more.

XXIII. Volunteer helpers are used in our work at the stations to weigh the babies and to take the dictation for the doctors. This leaves the nurse free

to give her attention to the mothers and to take the directions from the doctor. These volunteer helpers are under the supervision of the Stations Committee.

XXIV. Our Executive Board decides all matters in regard to the policy of the organization and governs the expenditure of the funds.

XXV. Our budget this year is about \$6,000. This amount is raised entirely by private subscription and we have no appropriation from the city or state.

XXVI. (a.) The nurses in training at the City Hospital are given a short course at the Lymanhurst Hospital for Babies, where our Medical Director is on the service.

(b.) We will probably, at the beginning of the year, work in connection with the Extension Department of the Agricultural School in carrying baby welfare work out into the rural communities of the state, but at present there is no organized work being done under our direction.

F. W. SCHLUTZ, M. D., *Medical Director*.

PUBLIC HEALTH ASSOCIATION

St. Paul

Organized December, 1912. Work carried on all the year round.

As a prize for the city selling the largest number of Red Cross seals per capita, we offer to pay the salary of a nurse for six weeks. The association has furnished to all who apply a copy of the booklet that was prepared by a special committee of the Association for Study and Prevention of Infant Mortality and that was published by the United States Public Health Service, entitled the "Care of the Baby." Many Health Departments receiving this from us mail it out for each birth certificate filed. The infant mortality rate in Minnesota last year was 75.

The recent request from the Minnesota Public Health Association for co-operation in a state-wide infant welfare campaign brought many enthusiastic responses.

The example furnished by a small city on the Mesaba Range is well worth copying after in other cities. Dr. N. C. Bulkley, Health Officer of Eveleth, responded as follows:

"Please send us 200 copies of the pamphlet on the care of the baby which the Minnesota Public Health Association announced it had for free distribution. We wish to send one to the home of every baby in town. Although many of the mothers here cannot read English, there is usually one translator to be found for each home.

"We started our school nurse at infant welfare work in June when the schools closed for the summer; as soon as a birth certificate is filed at this office the nurse visits the home to give instruction; she is often called earlier for advice or to assist during confinement. Physicians are required to report cases of diarrhea to the Health Department. We expect to cut our infant mortality rate about in two.

"Besides the infant welfare work, our nurse finds time to supervise all tuberculosis cases known to us."

Eveleth, although a small city (7,036, 1910 census) is more progressive in many respects than many of the larger cities of the state. A medical man who devotes his whole time to the health of the city has been employed since 1910; he acts both as health officer and inspector of schools. As a result of this efficient and sensible course of attack, Eveleth has routed many preventable

diseases, and reduced the death rate materially. For example, previous to 1910 there had been about 50 cases of typhoid fever per year; last year there was only one case; the previous year none. It may be expecting too much to ask all small cities to employ a whole time medical man without some state aid; they should, however, employ a whole time nurse for the school children in the winter and for the babies in summer. Municipalities that are slow to employ such nurses will be shamed into it eventually by the records furnished in the more progressive cities.

I. J. MURPHY, M. D., *Executive Secretary.*

NEW JERSEY

BOARD OF HEALTH

Montclair

- I.-II. Infant welfare work begun 1912. Carried on all the year round.
- III. Babies cared for
 - during year ending October 1, 1915.....130 clinic babies
 - about 100 additional who were seen by the nurse.
 - during year ending October 1, 1914.....115
 - during year ending October 1, 1913..... 13
- IV. Mothers reached during year ending October 1, 1915:
 - Italian, Negro, American, Jewish. About 50 per cent Italian.
- V. Staff: Doctor, one. Nurse, one.
- VI. Infant death rate in Montclair
 - for the year ending December 30, 1914..... 84
 - for the year ending December 30, 1910.....111
- XIV. Proper prophylactic measures are taken at birth for the prevention of blindness.
- XV. A privately organized asylum cares for homeless babies.
- XVI. Follow-up care is given when necessary by the Board of Health nurse.
- XVII. There is a Division of Child Hygiene in the Montclair Board of Health. All of the baby-saving work in Montclair is done under its supervision.
- XXIII. The clinic physician volunteers his services and so does the assistant to the nurse.

BEULAH A. BAIN, *Board of Health Nurse.*

ST. VINCENT'S NURSERY AND BABIES' HOSPITAL

Montclair

- I.-II. Organized in 1897. Carried on all the year round.
- III. Babies cared for
 - 1915..... 58
 - 1914.....104
 - 1913..... 90

IV. Staff:	Doctors	Nurses
1915.....	8	11
1914.....	6	15
1913.....	6	13

XII. Age limit, two years.

XV. Homeless babies are cared for and are adopted out by the New Jersey State Board of Children's Guardians.

DIET KITCHEN OF THE ORANGES

Orange

The Diet Kitchen of the Oranges was organized in 1893 for the purpose of helping the sick who were unable to obtain proper nourishment.

In 1906 the special care of babies was undertaken. During that year there were 22 cases.

In 1913.....211 babies

In 1914.....375 babies

In 1915.....611 babies

The infant death rate per 1,000, under one year, in the city of Orange in 1910 was 110, in 1914, 57.

We have two nurses on our staff, one on full time, the other as needed. Two doctors give their services at consultations; two classes are held each week.

Our prenatal work is so small that we can scarcely report it—merely a few cases that come to notice through the Baby Welfare work. This important feature of the work is neglected from pressure of other work and lack of time and money.

The postnatal work is carried on through home visiting and teaching, and at the consultation classes.

In July we transferred 368 babies to the care of the Board of Health, which now has two baby nurses paid by the city. The Diet Kitchen withdrew from a given district and confines its efforts to another part of town. The Board of Health reports to us all births in our district. The Visiting Nurses' Association and the Comfort and Welfare Society of South Orange also have charge of babies in their respective districts.

Little Mothers' classes were held during the winter and in the spring a series of demonstrations was held for the public school officials. The girls showed what they knew and the results have been very gratifying. Classes are to be conducted in the Central School of Orange and in the South Orange Grammar School, and a class is held after school hours in one of the East Orange grammar schools.

EMMA A. SPENCER, *President*.

NEW HAMPSHIRE

INFANT AID ASSOCIATION

Manchester

I.-II. The Infant Aid Association of Manchester was organized in 1912, incorporated in 1914. The work is carried on during July, August and September only.

III. Babies cared for

during the year ending October 1, 1915.....351
 during the year ending October 1, 1914.....266
 during the year ending October 1, 1913..... 97

IV. Mothers reached during the year ending October 1, 1915, 351, representing 19 nationalities.

V. Staff:	Doctors	Nurses
1915.....	4	5
1914.....	4	4
1913.....	1	2

VI. Infant death rate in Manchester

for the year ending December 30, 1914.....173

for the year ending December 30, 1912.....154

VI.-VIII. The association is carrying prenatal and postnatal work. The prenatal work was started in 1914. About 50 mothers have been cared for. Physician versus midwife is advised in all cases. Instruction is given by nurses and doctors. The average number of months the mothers have been under our care is two.

XI. If the mother is cared for at home, the need for a caretaker is referred to the District Nursing Association.

XV. Homeless babies are referred to the Children's Aid and Protective Society.

XVII-XX. There is a Division of Child Hygiene in the City Board of Health with which we have very friendly relations. One effect of our work has been to make the Board of Health see to it that all births are registered promptly.

Child hygiene is taught in the public schools by the school nurses.

XXI. The fathers are somewhat interested. Some attend the conferences. Greek fathers always make the first call with the baby.

XXII. Little Mothers' classes; an orthopedic clinic and weekly conferences with the parents have been added to our schedule during the year.

XXV. Budget, \$1,500. Raised by special appeals, an appropriation from the city and annual subscriptions.

MELUSINA H. VARICK, *Secretary-Treasurer.*
 (Mrs. W. R. Varick)

NEW YORK

CHILD WELFARE ASSOCIATION

Binghamton

The Child Welfare Association, of 107 Collier Street, Binghamton, N. Y., was organized June 24, 1913, and is the only organization in the city carrying on child welfare work.

The headquarters serve a two-fold purpose—as a "Women's Rest Room" and "Child Welfare Headquarters."

Before the opening of this room there was no public place where a mother could attend to her baby, as the rest rooms in the stores allowed no privacy whatever. The sight of tired mothers standing on the street with cross, hungry babies in their arms and other children by their side seemed so pitiful to the

founder of the association that she determined some place should be provided for them where they could also learn how to care for the children. The plan has proved a great success. The rooms are in a convenient location and city women as well as those from the country come there to rest.

In this way we reach women who would never think of going to a milk station for advice and yet do not know how to care for a baby.

The superintendent explains the work of the association and then the mother gets interested and begins to ask advice about her child. If possible we get them to enroll the child or children for the year and join the association. The dues are \$1.00 a year and those who cannot pay are enrolled free, no children are turned away because of poverty, but we find the mothers take pride in belonging to the association and would rather pay a little than feel they were accepting charity. In reality it is charity work as this fund only partly pays the rent of the rooms and the remainder we have raised by contributions, entertainments, etc. No one, not even the superintendent, received any salary for two years. Last July the Rotary Club became interested in the work and assumed the responsibility for the necessary expenses. We have never received any appropriations of public money.

The attendance at the headquarters for the first year was 4,600 and for the second ending July 1, 1915, 7,770. In September, 1913, a Better Babies Contest was held, and in September, 1914 and September, 1915. In all 550 children were examined. After the contests the children are brought regularly to the headquarters throughout the year, weighed, measured and the defects marked on the score card, and remedied if possible. All children enrolled are given a thorough examination by the superintendent, weighed and measured and a record made of the care on cards for that purpose. The mother is advised about the care, and, if they need a physician, urged to go to their family doctor. When necessary physicians give their services free and always for the examinations at the contests. Occasionally the superintendent goes to some nearby village where it is difficult for the mothers to come to the city and gives a talk to the mothers and perhaps holds a clinic. Some very interesting cases have been found in this way and there has been great satisfaction in helping them.

We do not distribute milk, but when we find those who need help we secure it for them from the Bureau of Charities.

Most of our mothers are Americans, but a few are Irish-Americans, Jewish and a very few other nationalities.

We intend to open two branch health centers in schools in the foreign section, but have not been able to do so because of lack of funds. We give baby clothing and other necessary things to poor families, and last winter found work for both men and women who were destitute. We cooperate with the King's Daughters nurse and she attends the confinement cases if no else has been secured. We send poor children to the City Hospital for operations when necessary, as there is no children's hospital here. Expectant mothers are given detailed instruction by the superintendent in the care of themselves and baby and what to prepare. They are also given literature from the State Board of Health, the Children's Bureau, and are loaned helpful books to read. We enroll children from a few weeks old to five years of age, thus keeping them under supervision until they enter school. We have 210 children enrolled now.

We make the Better Babies Contest an annual event, as it helps to arouse interest, but the regular work is carried on throughout the entire year.

VIOLA M. LEE, *Superintendent*

BABIES' WELFARE ASSOCIATION

New York City

I-II. The Babies' Welfare Association was organized June, 1912. Work is carried on throughout the year.

III. The association acts as a clearing house for the transferring of baby cases from hospitals to milk stations, convalescent homes, temporary shelters, day nurseries, etc.

Cases handled year ending October 1, 1915.....	4,226
Cases handled year ending October 1, 1914.....	362
Cases handled year ending October 1, 1913.....	184

IV. Mothers reached by lectures organized by Babies' Welfare Association and distribution of literature. Impossible to estimate number.

V. No doctors on general administrative staff; about 30 doctors serving on various standing committees of the Babies' Welfare Association.
1915, one nurse; 1914, none; 1913, none.

VI. Infant death rate New York City, per thousand births
1914..... 94.6
1910.....125.

VII. The Babies' Welfare Association is the federation of the infant welfare agencies in New York City; it now has over 90 members—all are organizations whose work directly or indirectly affects the welfare of babies under two years of age. Its object is to reduce the infant morbidity and mortality by working out the very best lines of co-operation between all existing organizations in the field in order that duplication of effort may be eliminated and the work of each member of the association may become more effective. The Central Office acts as a clearing house for cases and a general information bureau. The handling and adjusting of cases has increased so tremendously within the past year and has been the means of saving so much time and effort on the part of the district nurses and social workers besides opening up to them the assistance of every available organization in the field, that the Department of Health have assigned a nurse to assist and make possible the extension of this work.

VIII-XI. The association carries on prenatal work only through its affiliated organizations, each of whom will doubtless send in their own detailed report. The association's contribution to prenatal work has been the preparation of literature for distribution, known as "Instructions to Women about to become Mothers," and used by all organizations doing prenatal work in the city. A standard for prenatal work has also been drawn up by the association.

XII-XIV. The association carries on postnatal work only through its affiliated organizations. However through its standing committees on hospitals, dispensaries and on milk stations it has worked out and successfully put into operation a systematic plan for after-care for all discharged maternity cases in the city, putting them under the immediate care of the milk stations.

XVII-XVIII. The New York City Department of Health has a Bureau of Child Hygiene. The Babies' Welfare Association has an office in the Department of Health and receives the very fullest co-operation from them. The Department of Health furnishes in addition to the office space, stenographic service, postage, telephone, printing and also the services of one nurse as their contribution towards the support of the association.

XIX. Infant hygiene is taught in the public schools by the doctors and nurses of the Bureau of Child Hygiene to the girls in grades 5, 6, 7, 8. These girls form "Little Mothers' Leagues."

General hygiene is also taught in the higher grades under the direction of the Department of Education.

XX. There are about 350 to 400 organizations that are engaged directly or indirectly in the baby-saving work in this city. The Babies' Welfare Association is the federation of these organizations and its object is to prevent all duplication and overlapping.

XXI. Attempts have been made to have "Lectures for Fathers" in connection with some of the Better Babies Contests.

XXII. The work of the Central Office has increased so tremendously during the past year that it has been necessary to assign a nurse to handle the cases referred by mail and telephone.

XXIII. Volunteer workers have been used to assist in making a field survey.

XXIV. "The Board of Directors" outline the general policies of the association, elect officers, executive committees and appoint chairmen of all standing committees. The details of the work are carried on and directed by the executive and standing committees.

XXV. The annual budget is raised by the affiliated organizations and individuals interested in cooperative work. The Department of Health furnishes office space, stenographic service, telephone, mailing expenses, printing and services of one nurse as already stated.

MARY ARNOLD, *Executive Secretary*

NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS

New York

INFANT WELFARE WORK SEPTEMBER, 1914, TO SEPTEMBER, 1915

(Note: This report deals especially with item XIV. in the outline.)

For the purpose of ascertaining in what states there existed legal provisions for the prevention of blindness among infants, the Committee for the Prevention of Blindness has made a study of those state laws and regulations which relate to the control of ophthalmia neonatorum.* County and city acts, ordinances and rulings were not studied. A tabulation of the provisions of these laws—those from each state having been approved by its commissioner of health as correct to January 15, 1915—shows the following:

1. The reporting of babies' sore eyes to a physician or local health officer is compulsory in..... 30 states
2. The reporting law is printed on the birth certificate in.... 5 states
3. Local health officers are authorized and required to secure medical attention for uncared-for cases in..... 11 states
4. Births are reported early enough to be of assistance in prevention of blindness work in..... 4 states
5. The question as to whether or not precautions were taken against ophthalmia neonatorum is included on the birth certificate in..... 9 states
6. Free prophylactic outfits are distributed to physicians and midwives in..... 12 states
7. The use of a prophylactic as a routine is compulsory in... 6 states
8. Popular educational leaflets, relating in whole or in part to prevention of infantile blindness, are distributed by state departments of health in..... 19 states

* A complete tabulation of these laws may be obtained upon application from the office of the Committee, 130 East 22nd Street, New York City.

Quite evidently, there is yet much for the states to do toward safeguarding the eyesight of their infant citizens, for in no state do we find that all of the desired provisions exist, while in some no remedial legislation has been enacted.

Since January 15, amendments which improve the old statutes have been enacted in five states—Idaho, Illinois, Ohio, Oregon, Tennessee—while California and North Carolina enacted laws for the first time, requiring that babies' sore eyes be reported.

The Committee has, according to its custom, prepared a table showing the proportion of pupils blind from ophthalmia neonatorum in the state schools for the blind in this country. Replies were received from 28 schools, to which were admitted 602 pupils during the school year of 1914-15—91 of whom, or 15.1 per cent were blind from ophthalmia neonatorum.

The following table, showing the percentage of ophthalmia neonatorum victims admitted to schools for the blind during the past eight years presents interesting comparisons:

PROPORTION OF PUPILS NEWLY ADMITTED TO SCHOOLS FOR THE BLIND DURING THE PAST EIGHT YEARS, WHO ARE BLIND FROM OPHTHALMIA NEONATORUM

School Year	No. of Schools	Total new Admissions	Pupils Blind from O. N.	Per Cent
1907-08.....	10	290	77	26.5
1908-09.....	14	300	68	22.6
1909-10.....	13	325	67	20.6
1910-11.....	15	351	84	23.9
1911-12.....	24	415	88	21.2
1912-13.....	21	386	88	22.7
1913-14.....	19	428	84	19.6
1914-15.....	28	602	91	15.1

The figures for 1914-15 would suggest that a decrease in blindness from ophthalmia neonatorum is beginning to result from the campaign for the prevention of blindness started in 1906 by the American Medical Association, although a decline in the figures during one or two years is scarcely enough from which to draw conclusions.

It is safe to say that none of these pupils would be blind today had all the persons involved, that is, doctors, midwives, department of health inspectors and mothers, done all that lay in their power. In other words there are still imperfections in the machinery which is necessary to meet the needs of the individual baby suffering from sore eyes.

In an endeavor to correct this in New York, the State Department of Health, as well as of the cities of New York, Buffalo and Rochester, are repeatedly sending reminders, pleas and warnings, through the channels of their official bulletins (sent to health officers and physicians) concerning the importance of reporting babies' sore eyes and the institution of early and adequate treatment for infected infants.

Moreover, the New York State Department of Health, in its aggressive effort to save the sight of babies, is distributing a steadily increasing number of prophylactic outfits to physicians and midwives throughout the state; is including on its birth certificate the substance of the law requiring that babies' sore eyes be reported to local health officers, to serve as a constant reminder; is urging infant welfare nurses throughout the state to volunteer to the health officer in their community to follow up all cases of sore eyes referred to them; and for doctors and laity alike has published a new circular giving instructions for the prevention of blindness in infants.

The New York City Board of Health has amended its Sanitary Code in such a manner as to require that all cases of "suppurative conjunctivitis" instead of gonorrheal ophthalmia only, be reported. It is believed that this amendment will bring to official attention many more cases of babies' sore eyes than did the old requirement. Repeated notices of this change in the Sanitary Code have been published in the Department's Health Bulletin, and physicians have thus been warned that violations of the Code would be prosecuted by the Department.

Since January 1 the Department has reprimanded nine midwives and one physician for failure to observe this mandate.

In its effort to convince those concerned of the importance of bringing to official attention all infants suffering from infected eyes, the Committee for the Prevention of Blindness sent out a large number of requests to ophthalmologists, obstetricians, hospitals, philanthropic and relief agencies, nursing organizations, churches, mothers' clubs, etc., asking them to assist by reporting every case of babies' sore eyes of which they have knowledge.

The efficacy of these combined efforts of official and unofficial bodies is attested to by the number of cases reported between January 1 and October 15, 1915, 254 from the five Boroughs. This is an enormous increase over the records at the Department of Health for any previous year.

This reporting is encouraged solely to make it possible for the Department of Health to see that both prompt and adequate medical attention is provided for uncared-for cases. The mere filing of a large number of reports is of course of no value unless action immediately follows.

In considering the provisions which are necessary for the adequate control of ophthalmia neonatorum, we must note the importance of existing hospital facilities, not alone for the care of the infant, but for the admission of the mother, in order that maternal nursing may be continued.

For the purpose of ascertaining how general are these provisions in New York City, the Committee has inquired of the ten hospitals most important to this work, whether or not they make a practice of admitting the mothers of babies suffering from sore eyes.

It was found that nursing mothers of infant ophthalmia cases are admitted to the Manhattan Eye, Ear and Throat Hospital, the Herman Knapp Memorial Eye Hospital, the S. R. Smith Infirmary of Staten Island, the Bronx Eye and Ear Infirmary, and the New York Eye and Ear Infirmary.

When compiling information upon ophthalmia neonatorum cases, it is found, under present conditions, that in some of the eye hospitals the records of gonorrheal ophthalmia cases are kept separately, and accordingly are easily looked up, but that other forms of babies' sore eyes are buried in the general hospital records, and information concerning them obtained only with great difficulty, if at all.

Accordingly, the ten hospitals written to were asked if they would be willing to adopt a form of record for their infant ophthalmia cases which would make it possible at the end of each year to ascertain just how many infants suffering from all kinds of suppurative conjunctivitis had been admitted to the hospital; the infecting organism in each instance; whether the child had been delivered by a physician or midwife; at what stage of the disease the child was admitted; whether breast or bottle-fed; length of time in the hospital; kind of treatment given; and the condition upon discharge.

It is found that such records are kept at the S. R. Smith Infirmary, the Manhattan Eye, Ear and Throat Hospital, while a willingness to cooperate with the Committee in the suggested form of record-keeping has been expressed by the New York Eye and Ear Infirmary and the Children's Hospital on Randall's Island.

A very earnest effort is being made by the Bureau of Child Hygiene of the Buffalo Department of Health, whereby it is hoped that the very difficulties above referred to may be obviated. Each baby delivered by a Buffalo midwife is at once visited by one of the Bureau's nurses, who makes a number of observations, among them being the condition of the baby's eyes. Should there be any redness, swelling or discharge, a report is telephoned to the Department of Health, and a physician is sent at once. The baby is then either removed to a hospital or treated at home, with the assistance of the special eye nurse employed for this work by the Bureau of Child Hygiene.

Not only this, but physicians in Buffalo have been reminded, not alone through the Department's Bulletin, but by a letter addressed to each from the Commission of Health, that

1. Babies' sore eyes is a reportable disease.
2. It is the intention of the Department of Health to prosecute physicians and midwives alike who are found to be disregarding this legal requirement.
3. As the sole purpose of the Department in taking this attitude is to safeguard the eyes of babies, physicians will be given as much assistance as they wish or will accept, and therefore
 - a. Nursing service and bacteriological examinations are offered to those physicians who request this form or assistance, or
 - b. Hospital care will be provided for those infants who need more attention than can be given at home.

It would seem that a careful adherence to the system described above would mean that practically all cases of sore eyes would be brought to official attention at once, thereby making possible the essential treatment before it is too late. In other words, all emergencies are anticipated and provided for.

It is fitting to refer here to similar work which has been carried on for many years in Rochester, the cradle of infant welfare work in this country. The Rochester Department of Health has the midwife well in hand and easily removes all cases of babies' sore eyes to the hospital. The most serious difficulty in Rochester at present seems to be presented by a few negligent physicians who are able to clear themselves of responsibility when babies go blind.

Being convinced that the use of a prophylactic and early remedial treatment of babies' sore eyes can be made more general by widespread education, the Committee has redoubled its energies to spread broadcast throughout New York State in both medical and lay circles the fact that babies are still going blind from neglect and to urge more vigorous action toward its prevention.

To this end, the Committee is in communication with every county medical society in the state, and with a number of other medical societies as well. This branch of the work is done in cooperation with the Committee on Conservation of Vision of the American Medical Association which has delegated its educational work in New York State to the New York Committee. It is hoped that each medical society will include the prevention of blindness on the program of some one of its meetings during the year; also that some of its members will volunteer their services to speak before lay audiences. In Rochester, for example, a number of ophthalmologists have agreed to assist in carrying on sustained educational work, by speaking before groups of school children, factory workers, women's and mothers' clubs, the Y. M. C. A., nurses, etc. Similar plans are under way in a number of both the large and small towns throughout the state.

Moreover, the Medical Society of the State of New York, at its annual meeting held in Buffalo, April 26-29, adopted resolutions endorsing the effort being made by the State Department of Health, the Committee on Conservation of Vision of the American Medical Association and the New York Committee for the Prevention of Blindness, to extend educational work concerning

the prevention of blindness in babies, and to secure a more universal observation of the reporting law for the purpose of making early remedial treatment possible. The resolutions also request the State Department of Health to include suppurative conjunctivitis among reportable diseases.

A round table conference on prevention of blindness was held at the annual meeting of the New York State Nurses' Association, October 19-21. All public health nurses were urged to offer their services to the health officers in their communities for following up cases of babies' sore eyes, if no eye nurses were employed for this purpose. Plans were adopted whereby it was believed that the nurses throughout the state would give more efficient service in this connection.

A circular containing suggestions for prevention of blindness work has been sent to a number of women's clubs throughout the state, with the request that they help in arousing and sustaining a public opinion which will make it possible for local health officers to successfully prosecute doctors and midwives who are found guilty of neglecting babies with sore eyes. Already a number of clubs have appointed representatives to assist in this work.

MIDWIVES

Concerning the attempt to raise the status of midwife work in New York State, it is gratifying to report upon the work which has been inaugurated by the State Department of Health, in the planning of which this Committee has been permitted to cooperate. The inspection of midwives in New York State, excepting New York City, Buffalo and Rochester, is one of the functions of the Division of Public Health Nursing, and is performed by a graduate nurse who was carefully prepared for this office.

The first aim of the Department has been to have all midwives in the state register, in order that their existence and whereabouts might be known to the inspector—which is the first step toward control. The purpose of the inspection is not simply to ascertain the contents of the midwife's bag and the condition of her home, but to secure information concerning the character of the service which the midwives give their patients. This necessitates visits by the inspector to the homes of the midwives' patients, and also conferences with the midwives about practical details of their work.

The inspectors have found, as might be expected, three classes of midwives, the competent trained woman, the partly trained midwife who has been instructed by another midwife or a physician, and the absolutely untrained woman. The latter was in greatest demand because she was cheap and did not annoy the patients with cleanly precautions. As a lot they were without equipment, excepting some who owned scissors and string, and one woman when asked to describe her preparation for labor, said she changed her apron.

In order to limit the work of midwives to attendance upon normal cases only, and the giving of nursing care and instruction, a set of carefully prepared rules and regulations is supplied to each practising midwife, and the inspector endeavors not only to enforce these rules, but to assist in their interpretation and making them effective.

It is believed that as a result of the kind of inspection which has been inaugurated by the New York State Department of Health, midwives under its control will give better care to their patients than in the past, thus exerting a very real influence in the reduction of infant and maternal mortality and morbidity.

The Committee has also had the privilege of conferring with the Buffalo Department of Health, in introducing a system of midwife control which looks to the betterment of the large number of mothers and babies attended by these women in Buffalo.

One of the nurses in the Division of Child Hygiene is delegated to the supervision and inspection of the Buffalo midwives, and combines with her

inspection the greatest possible amount of help and instruction concerning the practical details of midwife work. Her energies are directed toward keeping herself informed upon the condition of the midwife's charges and she is planning to assemble the practitioners under her direction at regular intervals for lectures and conferences.

There is little doubt that the elimination of the utterly unfit midwives in Buffalo, and throughout the rest of the state, will be intelligently and satisfactorily effected by means of this kind of midwife control.

By a somewhat different system of control, midwives' work in Rochester continues to be held up to the high standard set some years ago by the Health Commissioner, who has this work under his immediate supervision.

Important as is the intelligent supervision of midwives in their practice, still more important is their careful and practical training before undertaking this work. That prospective midwives will avail themselves of the opportunities for training is exemplified in the short history of the little school for midwives at Bellevue Hospital. The school opened in the spring of 1911 with a capacity for 8 pupils, and from that time until January 1, 1912, there occurred 54 births in the hospital and six in the out-patient service. The present capacity of the school is 42 pupils, and it is found that during the year 1914 there were 307 cases in the school and 630 attended in the tenements by the pupils in their out-patient work, all of which is of course under close supervision.

It is encouraging to report that there are plans under way for the establishment of midwife schools in Chicago and St. Louis.

In extending its educational work, the Committee is in cooperation with the Children's Bureau at Washington, the General Federation of Women's Clubs, the National Organization for Public Health Nursing and the Committee on Conservation of Vision of the American Medical Association. It supplies to workers throughout the country photographic exhibits, lantern slides, leaflets and written lectures on the subjects of Babies' Sore Eyes and Midwives.

CAROLYN C. VAN BLARCOM. *Secretary*

NATIONAL LEAGUE OF NURSING EDUCATION

New York

The National League of Nursing Education has not established as a body any definite plan of action, as far as infant mortality work is concerned.

After the organization of Public Health Nursing Society, we gave up our committee, feeling that it would be wise to refer all questions of that nature to the Branch of the American Nurses' Association especially designed for public health work, the National League reserving for itself such work as pertains solely to the education and preparation of the nurse for whatever branch of work she desires to undertake.

Many of the hospitals are affiliated with the infant mortality organization and we desire to cooperate with it whenever we possibly can. In many training schools time has been set aside in the senior year for the purpose of studying public health questions.

The course at the Teachers' College has been supported morally by the National League. A committee from the National League acts as a Committee on Nursing and Health, Teachers' College as an Advisory Body to the Department. We also have the handling of a fund, the interest of which has been used to further the work of the Department of Nursing and Health.

S. LILLIAN CLAYTON. R. N.

NEW YORK ASSOCIATION FOR IMPROVING THE CONDITION OF THE POOR
New York City

Infant Welfare Work

FLIES AND DIARRHEAL DISEASE

Is the house fly the chief carrier of diarrhea to New York's babies, or has it more deadly rivals? Should some of the energy now expended in fly swatting be diverted to other details of home hygiene, or should the hue and cry after this insect pest be redoubled in volume? Do the fly-exposed infants suffer more than the infants in dirty homes, or than infants who are artificially fed?

An answer to these important questions has been sought by the Bureau of Public Health and Hygiene of the Association for Improving the Condition of the Poor, in a two years' study in the homes of more than a thousand infants, as reported in Bulletins No. 79 and No. 91.

In this, the second year's experiment, the infants were divided into two similar groups and were visited every five days by twelve nurses. The fly-exposed "control" cases received all the instruction usually given in child hygiene work but no special emphasis was laid on protection against the house fly. In the protected group, on the other hand, in addition to the instruction given the first group, great emphasis was laid on the screening of the baby; in the cradle, go-cart, on the bed and even in the arms, constant use of netting was insisted upon. Over one thousand yards of netting were distributed among the protected families. Effective fly literature, distribution of fly paper and special instruction by the supervisors were other means of reaching the families in which protective measures were taken. Accurate records of the health of the infant, the use of netting, feeding methods and other pertinent information were made at each visit. Analysis of some eighteen thousand records was made from the point of view of fly protection or exposure, home sanitation, feeding methods, nationality, age and atmospheric conditions of temperature and humidity.

The conclusions indicate clearly the relative importance in infant welfare of flies, dirt, and artificial feeding as determined by this study. Furthermore, the importance, in infant hygiene, of each condition in itself is strongly established. In baby welfare work none can be neglected.

CONCLUSIONS

Almost twice as many infants (1.9) had diarrhea among fly-exposed as among the fly-protected infants.

The group of influences, associated with a dirty home, and designated as the "dirt" factor, plays a similar part in diarrheal incidence among infants. Almost twice as many infants (1.8) had diarrhea in dirty homes as in clean homes.

Of somewhat greater importance is the influence of artificial feeding. Almost two and a half times as many infants (2.4) were attacked by diarrhea among the artificially fed as among the breast-fed infants. If the milk had not been selected and instruction in feeding given in many cases, this difference would have been still greater.

The influence of flies and "dirt" combined is of similar importance to that of artificial feeding. Almost two and a half times as many fly-exposed infants (2.4) in dirty homes were attacked by diarrhea as fly-protected infants in clean homes.

The influence of "dirt" and artificial feeding combined is still greater. Three and a half times as many artificially-fed infants (3.5) in dirty homes were attacked by diarrhea as breast-fed infants in clean homes.

RESPIRATORY DISEASE STUDY

The widespread interest and activity in infant welfare has centered largely upon the summer problem of diarrheal disease. Diseases of the respiratory tract, although playing an almost equally great part in infant mortality, have received far less attention from the investigative and preventive points of view. In view of the need of further study of the predisposing factors in causing respiratory diseases and the need of determining the most effective methods of attacking the problem, the Bureau of Public Health and Hygiene has planned a study of these conditions during the coming winter. With a clearer conception of the practical preventive measures, infant welfare agencies will be better prepared to direct their attention towards this aspect of the conservation of infant lives.

PRENATAL WORK: POSTNATAL MATERNAI INSTRUCTION

This association began prenatal work in 1907. During the year August, 1914, to August, 1915, 1,418 expectant mothers were under our care. Every expectant mother under the care of the New York Association for Improving the Condition of the Poor is referred to the Association's Bureau of Educational Nursing as early as pregnancy is noted. Sometimes the expectant mother is under our care as early as the second month; the time depends on when the applicant is known to the association. The nurse gets the patient under the care of a clinic as soon as possible, and home or hospital care is planned. Regular visits are made to the home, and instructions are given by the nurse as to diet, exercise, fresh air, personal cleanliness, care of breasts, avoidance of alcohol and observation of urine and stools. Visiting housewives are sometimes sent to help with the heavy domestic work, both before and after confinement. For confinement, we use the maternity hospitals or out-patient clinics in the districts, the Bellevue School of Midwifery or registered midwives, when the woman insists upon a midwife, and occasionally the private doctors. At the time of confinement, the nursing care in the home is given by the nurses from maternity clinics, by the Henry Street Settlement nurses or by the midwives, our nurses visiting and urging that instruction given is strictly adhered to, and also sending in the visiting housewife.

After the birth of the child, every effort is made to have the baby placed under the care of a milk station, our nurses for a time again continuing to visit and urging the mother to follow advice given by the nurses and doctor at the milk station.

An important part of the infant welfare work of the Association is carried on at the convalescent home and school for mothers, Hartsdale, New York, twenty miles out of New York City. This home is open all the year round and is used to its utmost capacity. The house accommodates thirty mothers with their infants and forty or more older children. The mother goes as soon after childbirth as possible. There is no time limit to her stay there. Her needs and her home situation decide. The average stay is from two to three weeks. The mother is relieved from all responsibility of the children except the care of her infant. Careful demonstration is given her by the nurse on how to care for the baby. Then the daily repeated giving of this care under the eyes of the nurse means that the mother understands what she has been taught. She is given practical lessons in food values, and taught the preparation of good, simple food for her family. Here, too, the demonstration by the daily routine for mothers and children at the home means that the lessons are really learned. Not the least part of the value of Caroline Rest is the complete change from their difficult surroundings. Every effort is made that the weeks spent there should be happy ones, full of rest, recreation and inspiration.

Mothers are referred by maternity hospitals and dispensaries, churches, milk stations, nursing and charitable agencies, besides those under the care of our own association.

INFANT WELFARE AND RELIEF

The Bureau of Rehabilitation and Relief had in its care during the last fiscal year 9,467 families, with approximately 3,000 infants. A large part of the material relief dispensed by the Bureau for food, clothing, fuel, rent, etc., is for the sake of the children. The year's disbursements for material relief was \$151,519.75.

All cases of infant illness are promptly placed under the care of the Bureau of Nursing. For the well babies the Relief Bureau furnishes pure milk, the year's disbursements for milk being \$20,159.39; also for the mothers, practical lessons in the preparation of food, cooking and sewing.

The Bureau of Fresh Air maintains Sea Breeze, a seaside home which, during the five summer months, provides two-weeks outings for mothers and children, with the care and instruction of resident nurses. The number of infants received during the last season was 311.

DONALD B. ARMSTRONG, M. D., *Director,*
Department of Social Welfare.

NEW YORK DIET KITCHEN ASSOCIATION

New York City

I.-II. The New York Diet Kitchen Association was organized in 1873. Work continued throughout the year.

III. Number of babies cared for by the association

during the year ending October 1, 1915.....	5,046
during the year ending October 1, 1914.....	4,326
during the year ending October 1, 1913.....	4,358

IV. Number of mothers reached during the year ending October 1, 1915, 5,112 (including expectant mothers).

Nationalities represented: Americans (white and colored), English, Irish, Scotch, West Indians, Swedes, Norwegians, French, Italians, Russians, Servians, Germans, Austrians, Hungarians. Jews are of course included in many of these.

V. Number of doctors on our staff

during the year ending October 1, 1915.....	20
during the year ending October 1, 1914.....	18
during the year ending October 1, 1913.....	14

Physicians composing the staff are partly volunteers and partly assigned from the Division of Child Hygiene of the Department of Health.

Number of nurses on our staff

during the year ending October 1, 1915...	9 and 1 supervising nurse
during the year ending October 1, 1914...	7 and 1 supervising nurse
during the year ending October 1, 1913...	6 and 1 supervising nurse

VI. Infant death rate in New York City

for the year ending December 30, 1914....	94.6 per thousand births
for the year ending December 30, 1910....	125. per thousand births

VII. Originally established to supply nourishing food to patients sick in their homes, the association was one of the pioneers in the crusade for pure milk, and has been dispensing that article alone for many years. Since 1908 its activities have included a large amount of work among mothers, babies, and

little children. At the present time it is maintaining eight milk and health stations where both prenatal and postnatal work is carried on; also conferences for children between the ages of two and six years.

PRENATAL

VIII. Prenatal work was started in one of the stations September, 1912. Number of expectant mothers cared for was 1,543.

These mothers are secured from obstetrical clinics, affiliated organizations, hospitals, etc., but the larger number come from the families already under the stations' care or within their district limits.

The instruction is given by the doctors and nurses attached to the Association's stations; also by the physicians connected with the obstetrical hospitals or dispensaries in whose care the expectant mothers are placed.

Mothers under care for periods varying from 1 to 8 months.

IX. It is felt by the association that the prenatal work has had the effect of reducing the number of births during the first month of life, reducing the number of stillbirths, but its most marked effect has been in increasing the number of breast-fed babies, and the demand for skilled obstetrical care.

X-XI. Excellent cooperation has been secured with the obstetrical hospitals and maternity out-door service, through which provision is made by the nurses for the care of the mothers during their confinement.

The staff does not include obstetrical nurses.

POSTNATAL

XII. The main features of the postnatal work are baby conferences, with the nurses and doctors in charge, demonstrations for the mothers, either singly or in groups, at the stations, with supervision and instruction in the homes. The age limit of babies under care is two years.

XIII. Several of the stations maintain direct relations with the hospitals caring for sick babies, but such care is mainly secured through the Babies' Welfare Association.

XIV. No especial organized work for the prevention of blindness is carried on by the association, but in every case careful attention is paid to the eyes of all the new-born babies under the care of the stations.

XV. Provision for the care of homeless babies is usually made through the Babies' Welfare Association.

XVI. In November, 1914, the first health conference was established in one of the association's stations for the children between the ages of two and six years. This service has been extended to four other stations and the association hopes eventually to conduct such conferences in all of its stations.

XVII. The Department of Health of New York City has a Bureau of Child Hygiene with which this association is closely affiliated, outside of its formal connection through the Babies' Welfare Association.

XVIII. In establishing its own milk stations, the Department of Health has considered the location of the Diet Kitchen Association's stations as well as those of other organizations, and has accepted a map of milk station districts agreed to by all milk station organizations affiliated in the Babies' Welfare Association.

XIX. "Little Mothers' Leagues" among the public school children have been organized by the Bureau of Child Hygiene of the Department of Health for instruction in infant hygiene.

XX. About 350 organizations are engaged directly or indirectly in baby-saving work in New York City, and duplication and overlapping are prevented by affiliation of these organizations in the Babies' Welfare Association, of which 90 are members.

XXI. Up to the present time no especial effort has been made to instruct the fathers except as they occasionally attend the baby conferences.

XXII. The association has added one conference center to its activities during the past year at which baby conferences are held and general instruction given the mothers, without dispensing milk. Another extension of the association's work has been the addition of the children's conferences in five of the stations with the consequent follow-up work in the homes. In this latter effort the association seeks to continue the work begun in the baby conferences, and much the same methods are pursued as with the babies. The children are brought to the stations, inspected and examined, and measures are taken to correct such defects as may be found, while the mothers are given instruction at the stations and in the homes as to the best ways to maintain the health of their children by proper care and feeding. Also sewing classes in several stations and one cooking class were introduced this year for the first time.

XXIII. Up to the present time only a few volunteer workers have assisted in the work of the association. These volunteers have been assigned to special work and have been under the supervision of some member of the staff.

XXIV. "The Board of Managers shall have the entire control and management of the property, affairs, and business of the association, subject to the provisions of the charter and by-laws. They shall authorize the selection of suitable stations, fix the compensation of all attendants, assistants, and agents, and authorize the purchase of stores, supplies, and other things necessary for carrying on the work of the association. They shall have power to fill any vacancies occurring during the year in their own Board, or in any office of the association."—By-Laws, Art. XV., Sec. 1.

From the Board of Managers, one is selected by the president for each station that the association maintains. These members are called directresses and are supposed to visit the stations frequently, keep in close touch with their work, and report to the Board at its monthly meetings concerning the stations.

XXV. The funds of the association are raised by annual subscriptions, by entertainments, by appeals, and through auxiliaries, and in addition, the association receives an appropriation of \$500 from the city.

XXVI. While the association has no organized plan whereby nurses are given an opportunity for instruction in baby welfare work, at various times it has assigned individual nurses to the stations for experience in conference and district work.

MARIA L. DANIELS, *Director*.

NIAGARA FALLS CHILD WELFARE ASSOCIATION

Niagara Falls

The success of the Milk Dispensary started and directed by Dr. Carl G. LeoWolf, which operated during the three summer months of 1913, encouraged those interested to believe that the work might be made permanent. The Niagara Falls Child Welfare Association was accordingly organized in June, 1914.

During the past year the association has maintained a milk dispensary at Twelfth Street, directed by Dr. LeoWolf for three months and since that time by Dr. Frederick Leighton. Two clinics a week have been held at which 160

babies have been cared for. This large attendance at the clinics seems to demonstrate that the enterprise has fully shown its need and usefulness.

For the first four months the mothers were able to buy milk each day at the dispensary modified by the nurse to suit the needs of the individual babies. In November it was decided to follow the example of older dispensaries and leave the modification of the milk to the mothers at home under the supervision of the nurse. The latter sells milk tickets to those able to pay and gives them to those who cannot and then visits the homes constantly to see that her directions for preparing the babies' food have been carried out. The name "Milk Dispensary" was then changed to the more appropriate one of Health Station. As this is primarily a work of education we have been glad to see that, generally speaking, the mothers have been quick to profit by the instruction given them and that the change of policy has not lowered the clinic attendance.

To help the general public to realize the great need of organized work to combat infant mortality, the New York State Department of Health has sent to Niagara Falls at the request of both the City Board of Health and Child Welfare Association, two Child Welfare Exhibits.

The funds for maintaining the Health Station have come from two sources: Annual dues from the members of the association and appropriations made by the Common Council through the Health Department. The City Board of Health, through the Health Officer, Dr. Gillick, has cooperated in a most helpful way both in maintaining and in supervising the work. The Board of Health has paid more than one-half of the total expenses of the enterprise.

FREDERICK LEIGHTON, M. D., *Medical Director.*

HEALTH BUREAU

Rochester

I-II. The child welfare work of the Health Bureau, Rochester, N. Y., was organized in 1897. Work not carried on all year round.

III. Babies cared for

in season of 1915 (2 months) 3,691

in season of 1914 2,274

IV. Nationalities of parents represented: American, Italian, German, Polish, Jewish, Russian.

V. Doctors on staff: 2 in 1915.

VI. Infant death rate in city for year ending December 30, 1914, 88.

VII. Both prenatal and postnatal work are carried on.

VIII. Features of prenatal work:

a. Having patient examined regularly by physician, urinalysis, preparation for delivery.

b. Mothers instructed and cared for, 84.

c. Mothers come from homes.

d. Instruction given by nurse and physician.

e. Months under our care, two.

IX. Effect of prenatal work:

Not yet reduced percentage of deaths during first month of life.

Increased demand for skilled obstetrical care.

XI. Care during confinement: Discourage care of mothers by midwives; arrange for hospital care. Staff includes no obstetrical nurses. When mother is cared for at home, visiting nurse calls daily.

XII. Age limit of babies under our care, three years.

XIII-XIV. We have direct relations with a hospital for babies. Organized work for the prevention of blindness is being carried on.

XV. Homeless babies are placed out through the Children's Aid Society.

XVI. Welfare nurses follow up children who have been in our welfare conferences and have them treated at dispensaries.

XVII. We have a Department of Child Hygiene in the state.

XIX. Child hygiene is taught in the public schools. By the school nurses. To Grades 4 to 8 and vocational schools.

XX. The Bureau has entire charge of the baby-saving work in Rochester.

XXII. Enlarged our work this year by opening day nursery at one Welfare Station. Thirty to forty children.

XXV. Budget in 1914, \$3,200, appropriated by city.

GEORGE W. GOLER, M. D., *Health Officer*

NORTH DAKOTA

ASSOCIATED CHARITIES

Fargo

I-II. The Associated Charities of Fargo was organized in the year of 1910 by a number of our most prominent citizens who realized their responsibility to the community and who were willing to give of their time and money to a worthy cause.

The funds for the work were raised by pledges, voluntary contributions and by one-dollar membership fees.

A part-time secretary was engaged, and the services of a visiting nurse were secured. This was only a beginning and was intended to be primarily an educational work. It seemed then that the people would respond generously to the call for help, after the greater economy and greater efficiency of cooperation, and the results of trained social workers had been proven. But the officers of the organization made the mistake of employing an untrained man as secretary, from which mistake the organization has never recovered.

The work of this secretary was not satisfactory, the people lost confidence in the organization and refused to contribute as generously as before. After two or three years the secretary was asked to resign, and the nurse was made acting secretary, which position she has held for the past two and one-half years, in addition to her other duties as public health nurse.

Infant welfare work was not to be the primary object of this organization, but was to form a large part of the nurse's work. Miss R., the first nurse, was so successful with her people that she was soon overworked to such a degree that her health broke down, and she resigned after three years of splendid service. The organization has never been able to increase its nursing staff except temporarily. During the current year an assistant was engaged from the first of January to the middle of June.

IV. Most of our patients, or about eighty per cent, are of foreign birth; about fifty per cent are Russian Jews and thirty per cent Scandinavian, the rest are German, Irish and American, with a sprinkling of Italians. These women are good mothers and need no persuasion to nurse their babies. They are very anxious to learn how to improve their living conditions, and take advantage of every opportunity, so that it is a real pleasure to work among them.

We have never been able to get a dispensary, although there is a great deal of agitation for one going on here this fall. We hope to succeed in getting one established by the time cold weather sets in.

Expectant mothers engage their private physician, usually early in their pregnancy. When it is found that a mother is unable to pay her physician, she is reported to the city physician whose duty it is to take care of her. Unless there is a family physician willing to do it free of charge.

In North Dakota we have a fairly good "vital statistics" law, passed years before some other states ever thought of passing such a law. But our state legislators have never seen fit to make an appropriation sufficient to enforce it. A birth may, or may not, be reported, according to the personal conscience of the attending physician or midwife.

VI. The infant death rate in North Dakota and especially in Fargo seems to be unusually high when compared to the birth rate. This is due to the fact that deaths are usually reported while births are not.

Upon examination of our city register we find that from October, 1913, to October, 1914, there were 340 births registered. During the same period we find 81 deaths among children at the age of two years and under. Eleven of these were premature, the babies dying in a day or two, and eight stillbirths. From October, 1914, to October, 1915, there are reported 366 births, during this same period we find 71 deaths, fifteen of these were premature, and 12 stillbirths. Our birth and death registers are kept in the office of the city auditor, and not by the health officer. The auditor's clerk tells me that about one-half of the physicians report promptly every birth attended by them. The rest never think of their duty towards the child or the state.

VIII. Our cases come to us in every possible way. By the doctors, neighbors, by patients previously cared for, but most often by the expectant mother herself. The nurse makes it her business to try to see every expectant mother she hears about among the poor in her district, and to offer her services. By gradually working herself into the good graces of the new arrivals in a community the nurse has little difficulty in persuading these mothers to see their physicians, and if they are thinking of employing a midwife, to change in favor of the physician. We have had between two and three hundred mothers on our list during the past two and a half years visited at certain intervals. After a case has once been found, regular visits are made at intervals of ten days or two weeks, and the mother is assured that she may ask as many questions as she likes.

The instructions usually given to prospective mothers are: First, to see their physician as early as possible. Second, to have a specimen of urine examined regularly. Third, regarding the preparation for their confinement, the baby's clothing, the amount and kind of exercise and recreation they should take, and regarding their diet. We report any unfavorable symptoms to the physician at once, but have no rules regarding the number of months a woman should be under care.

Very frequently the nurse may receive a sudden call to one of our outlying districts, where a mother is or has been confined, of which case we had no previous knowledge. It may be the case of an unmarried woman, who must be sent to a hospital, the County Hospital or Florence Crittenton Home, or it may be that a physician finds himself alone with an abnormal case, where the easiest thing to do is to send for the public health nurse. But we like to see the mother at the earliest possible date.

We are not prepared to say just what effect our work has had on the reduction of infant mortality in our city. We believe that it has had a very good one. On going over our list we find that the death rate among the children cared for by our organization is especially low. Out of a total of over a hundred babies cared for during the past two years, we lost two. These died

of internal hemorrhages, and out of six premature births, not counted in the one hundred already mentioned, only one had been reported previous to the confinement; two of these mothers gave birth to twins.

The percentage of stillbirths is unusually high in Fargo, but we have had no such cases among our people.

Up to the present time every case of confinement was attended by a reliable physician, however we have two or three women who have always employed a midwife until the first time the visiting nurse made her appearance and pointed out to the prospective mother the danger to herself and to her baby of not having skilled obstetrical care. There are still two women (American) to my personal knowledge that have gone through confinement after confinement with nothing more than the care of an old and untrained midwife, to whom they usually pay the same fee if not more than they would to a physician. This is due to prejudice on the part of the woman, who objects to calling in a man, even though a physician, to care for her at this time.

X. Fargo has at present no maternity hospital. Our city and county hospital is three miles from the city, and is too small to accommodate any except emergency cases. An unmarried mother may be sent to the Florence Crittenton Home, where she is required to stay from six months to one year, but the majority of our expectant mothers, rich and poor alike, must make arrangements for their coming confinement in their own homes. We can usually get some practical nurse or neighbor to come into the home and look after the poor mother and child and other children, and who will work under the instructions of the public health nurse.

XV. We have never attempted to board our babies out except in isolated cases, and after careful investigation of the home to which the baby is taken. Homeless babies are taken to the Children's Home of North Dakota, from which they are adopted out to families by the Children's Home Society. Every child so placed is kept under observation until it has reached its majority. The little ones receive excellent care in this institution; the only drawback is that this institution is sometimes overcrowded. There are a few lying-in hospitals, and babies' boarding homes, conducted by private parties; these did not have to be licensed until now. These places are a menace to the community and cases are not sent there. Any woman could up to the present time board as many babies as she liked, regardless of her fitness for the work and the care she was able to give them. During the last session of our legislature a law was passed requiring the licensing and supervision of every maternity or infant boarding home in the state, from which we hope to get good results unless it too, like our vital statistics law, is disregarded.

XVII.-XIX. We have no city hygiene department and the subject is not taught in the public schools. The Agricultural College is the only place where a home-makers course is given. Domestic science is taught in the High School, and sewing and manual training in the grades. We have had one "Better Babies Contest" and lectures have been given to mothers at the meetings of the Neighborhood Clubs in the schools, and literature is distributed by the Associated Charities. During our last county fair literature was kindly donated by the Metropolitan Life Insurance Company.

Our city health department, up to a year ago, was loosely organized; the efficiency of this department depends almost entirely upon the physician, doing good or poor work as the case may be.

During the past year we have had almost ideal cooperation between that body of our organization, and with the help of some of our leading citizens many improvements have been brought about. A garbage ordinance was passed. Diphtheria cases must be kept in quarantine until two consecutive negative cul-

tures are obtained, and a housing law, which is most necessary, is being drawn up, and many disease-breeding spots have been cleaned up.

It is said that the care of the children is the mothers' work, and so it may be, but we find that when father takes care of little Francis or walks the floor with Mary, he is far less apt to desert his family, and is a much better provider. Because he knows and loves his baby better than he who never sees his child from one day to the next; however, we have done very little towards interesting him in baby welfare work. The only delinquent fathers we have are the drunkards, deserters, and the "I won't works."

XXIII. Many of the foremost and influential people of Fargo act on our Board of Directors, but the work is usually done by the few who take their duties seriously. The majority are conspicuous by their absence when a meeting is called.

XXV. Our annual budget is made up, first, by an annual appropriation from the General Fund by the city and county of \$600.00 each; second, by annual membership fees of one dollar each; third, by annual pledges from five dollars up; fourth, by charges for the services of the visiting nurse.

During the current year we have about twenty-five hundred dollars altogether, from which you can easily see how hard it is to do even the little reported here.

BARBARA HAZEL, *Secretary.*

OHIO

JEWISH INFANT WELFARE CIRCLE

Cincinnati

The Jewish Infant Welfare Circle was organized January 27, 1915, for the purpose of investigating all conditions surrounding Jewish children from birth until two years of age. It is primarily a study class which gives direct aid only in so far as that aid will tend to broaden a knowledge of the situation, therefore, the Circle has been divided into a number of committees, the first, to keep an accurate account of the births of Jewish children, to whose mothers a second committee sends letters of congratulation with the advice of a weekly clinic and milk station held in the Settlement District. A third committee visits the homes and a fourth conducts the milk station.

Since January to October 1, 186 new babies were reached and 450 children were seen at the milk station. A record of the mortality rate among Jewish children is being kept and for this purpose we have secured a record of births and deaths starting with 1914.

As we come to a larger understanding of our subject, we shall broaden our field to take in prenatal work, hospital service, etc.

The work is carried on entirely by volunteers, with the aid of a professional leader, a doctor and a nurse.

MRS. CARL E. PRETZ, *Chairman*

VII-VIII. Prenatal: About 500 prenatal cases per year; prenatal work started February 1, 1915.

XII. Postnatal: Care of mother and baby until mother is up and baby's cord is off. Time is usually 8 to 10 days.

Age limit of the babies under our care: All babies under private doctors' care under three years and other children over three years.

XVII. The work of the Bureau of Child Hygiene in Cleveland is carried on through Babies' Dispensary and Hospital. See report above. We cooperate with the Bureau.

XXV. Total budget about \$50,000 for this last year. Funds raised largely voluntary subscriptions through Federation for Charity and Philanthropy.

WESTERN RESERVE UNIVERSITY MATERNITY DISPENSARY

Cleveland

I-II. Organized 1910; work carried on all the year round.

III. Babies cared for:

1915..... 738

1914..... 638

1913..... 528

IV. Mothers reached during the year ending October 1, 1915, 1,500; all nationalities, including Japanese and Chinese.

V. Doctors on our staff: 1915, 4; 1914, 4; 1913, 4.

Also all senior students are on duty from three weeks to one month under supervision of staff.

Nurses on our staff: 1915, 2; 1914, 2; 1913, 3.

All senior pupil nurses from Maternity Hospital, Huron Road Hospital and one-half from Lakeside Hospital on duty, from one to three months, under supervision of postnatal nurse.

VII. Postnatal work was organized first in 1909. Prenatal found necessary in 1910. Growth very rapid during last two years.

VIII. Mothers instructed or cared for: More than 5,000. Sources from which mothers come: all dispensaries, obstetrical clinics, nursing organizations, relief organizations, doctors, private individuals, voluntarily.

Instruction is given by prenatal nurse. Investigation of homes, instruction of mother, personal hygiene, clinical supervision, including aid of other relief organizations when necessary.

IX. Effect of prenatal work:

(a) Reducing the percentage of deaths during the first month of life approximately 40 per cent.

(b) Reducing the percentage of stillbirths 90 per cent.

(c) Increasing breast feeding 30 per cent.

(d) Increasing the demand for skilled obstetrical care 75 per cent.

X. We have direct relations with the Maternity Hospital, City Hospital, Clinic and Lakeside Hospital. Hospital care when most needed. Home care preferably.

XI. Our staff includes obstetrical nurses. Hospital care is secured if needed. If the family cannot provide a caretaker the mother is sent to a hospital.

XII. Postnatal: Distinguishing features of our postnatal work: Elimination of infections of mother and baby; low death rate; babies referred to Babies' Dispensary for prophylactic care.

Age limit of the babies under our care, ten days.

XIV. We work with the Ohio Commission for Prevention of Blindness. We refer homeless babies to the Humane Society, Babies' Dispensary Boarding Home Department, Infants' Rest, St. Anne's Maternity Hospital.

In the case of boarded out babies, we follow the "one child per home" system.

XVI. The children who have been cared for by our Dispensary are followed up by the Babies' Dispensary.

XXII. Changes during the current year: Obstetrics has been made a major subject at the University, making more detailed compulsory postnatal work for senior students and nurses.

XXV. Annual budget approximately \$8,000 to \$10,000. Funds raised by appropriations from Western Reserve University.

PENNSYLVANIA

BABIES' HOSPITAL

Philadelphia

I-II. The Babies' Hospital of Philadelphia, located at Llanerch, Pa. was organized in July, 1911, for the purpose of treating infants suffering from enteritis and malnutrition.

The Dispensary or Out-Patient Department located at 609 Addison street. was established in the latter part of 1912 for the treatment of babies under three years of age belonging to the poor of this district.

While the hospital has been kept open only during the summer months of 1915 the dispensary holds daily clinics throughout the year.

III-IV. Due to the short period of its activity the Hospital cared for only 122 cases this year as against 313 last year and 281 in 1913. The Dispensary work, however, has steadily increased from 182 in 1913 to 622 in 1915 with a total enrollment of 1148. This year a total of 987 new cases, including prenatal, prophylactic, dispensary and hospital, have been reached, representing many different nationalities with Italians and Jewish mothers predominating.

Examination and treatment was given together with visits at the home, until the case fully recovered, after which a systematic follow-up is continued until the child is six years old.

V. The increase in this work has made necessary the employment of 2 additional visiting nurses so that there are now 5 nurses employed at the Dispensary and 4 doctors on its visiting staff, while the Hospital employs 13 nurses and has 8 physicians on its staff.

VIII. In March of this year prenatal work was added to the activities of the Dispensary, and to date 167 cases have received instruction from our nurse and thorough examinations have been made at the clinic,—102 of these cases have been delivered with excellent results; only 6 deaths, 2 of which were stillbirths, have been recorded, giving a death rate of 60 per 1000 births.

Mothers usually come under our care during the fifth month of pregnancy, having been referred here by clinics, hospitals, physicians and visiting nurses, and after examination are visited regularly by the nurse who instructs in personal hygiene; takes samples of urine for analysis; secures accommodations at maternity hospitals or other obstetrical care for the prospective mother and arranges for the care of the family during the confinement period.

XII. The postnatal work, aside from the dispensary cases, is entirely educational consisting of visits to the home where instructions are given the mother in personal hygiene, the care of her baby and the preparation of its food. Efforts are also made to secure better living conditions.

XVI. This organization was one of the first to inaugurate a systematic follow-up of all cases until the child reached school age and the results have been such that the board feels fully justified in continuing this work.

It is not possible to give accurate data on the results so far obtained except a comparison of the death rate of cases discharged from the hospital during the past 4 years and the rate during the first year when no follow-up work was done.

This comparison shows that in 1911 the subsequent death rate was 22 per cent while in 1915 it was only 3 per cent. Fathers are interested in work of this nature and lectures are given to groups of them at irregular intervals.

XXV. Our annual appropriation of \$12,000 is secured by special appeals and annual subscriptions, while the extension of our activities for the coming year will necessitate a much larger amount.

Nursery maids are trained at the Hospital which materially lessens the expense of caring for the babies.

SIDNEY G. DAVIDSON, *Executive Secretary*

BABIES' WELFARE ASSOCIATION

Philadelphia

I-II. The Babies' Welfare Association of Philadelphia was organized March 30, 1914. The work is carried on all the year round.

III. From April 1914 to April 1915 there were 650 babies referred to co-operating organizations including nine nationalities. At the end of that time this special feature of the work was transferred to the Division of Child Hygiene.

IV. Nationalities represented in the work: American (white and colored), French, German, Jewish, Italian, Irish, Polish, Swedish.

V. The Babies' Welfare Association is composed of an Executive Committee and each member of the Executive Committee is the Chairman of a Sub-Committee. The majority of the Executive Committee is made up of physicians and practically all of the physicians in Philadelphia who are interested in the care of babies are members of one or more of the committees.

VI. Infant death rate

	1910	1914
Born	38684*	41063
Died	5334*	4981
Rate	137.9	121.3

VII. The work is that of cooperation carried on through the different committees.

VIII-IX. Prenatal Committee started in January 1915.

X. A pamphlet was published by the Committee on Prenatal Care and distributed among the different hospitals and dispensaries doing prenatal work.

*Figures furnished by the State Department of Health.

XII. Babies are under the care of the Division of Child Hygiene until they are one year of age.

XIII. We have a hospital chart whereby any hospital can obtain information regarding an empty bed for a baby. We also have special telephone night service.

XV. Homeless babies are placed through the Philadelphia General Hospital and other cooperating institutions. Through the work of the Babies' Welfare Association the City of Philadelphia now requires all places boarding babies to have a license. The rules and regulations governing baby farms and boarding homes for infants have been revised and made more stringent. The baby farms have been investigated and those not attaining the required standards have been closed, they are now under closer supervision and inspection of the Division of Child Hygiene.

XVII. There is a Division of Child Hygiene in the Philadelphia Health Department. There is an appropriation from the city by which the work is carried on. By the efforts of the Executive Committee of the Babies' Welfare Association during the past year the Division of Child Hygiene has been enlarged until now they have a supervising nurse, 28 trained nurses in the field, and appointments are to be made within the next month for the head of the Division and a woman medical inspector. The work is educational.

XIX. Child Hygiene is a part of the Domestic Science course in the seventh and eighth grades of the elementary schools. This instruction is compulsory for all girls attending schools with housekeeping centers. In addition and entirely independent of this, Little Mothers' Leagues are conducted in the public schools to younger girls by the Child Federation with the permission of the Board of Education.

Courses in home-making are given in the domestic science course.

XX. There are a number of organizations doing baby saving work. Our aim is to bring the organizations into closer association with each other, to see that the full resources of each association are known to all other members, and to prevent overlapping.

XXI. A special effort is made to keep the fathers employed.

XXII. Two new committees have been found—one of Municipal and Visiting Nurses and one on Prenatal Care. We also have a bureau for the supervision and supplying of wet nurses. A special investigation is now in progress relating to private maternities.

XXIII. Volunteer workers are utilized for investigation purposes supervised by the chairman of the Committee for whom they are working.

XXV. There is one salaried position—Assistant Secretary. The funds are raised by special appeals.

XXV. A special effort has been made by the Committee to have the Directresses of all Training Schools for Nurses include in their course, if it has not already been incorporated in the work, special training in prenatal care and baby work.

THE CHILD FEDERATION HEALTH CENTRE

Philadelphia

I-II Organized June 15th, 1914; carried on all the year round.

III. Year ending October 1915—551 babies cared for.

IV. Number of mothers reached during the year ending October 1st, 1915, 1,071. Six colored patients, two Jewish, and the balance Italian.

V. Doctors on the staff during the year ending October 1st, 1915. One house physician and one visiting obstetrician.

Nurses on the staff during the year ending October 1st, 1915, two.

VI. Infant mortality rate in Philadelphia:

For year ending Dec. 30, 1914.....121.3

For year ending Dec. 30, 1910.....137.9

(This is the rate per 1000 births)

VII. Both prenatal and postnatal work carried on.

VIII. Prenatal,

(a) Started June 15th, 1914.

(b) 172 mothers cared for.

(c) Cases obtained by personal visitation in the homes.

(d) Instructions regarding:

Diet

Ventilation

Exercise

Clothing

Care of breasts

Bathing

Condition of kidneys
and bowels

Preparation for confinement

Outfit for baby

Instructions given by physician at Centre and nurse in the home.

(e) Average number of months under care, four.

X. Patients are referred to most convenient maternity dispensary.

XI. They are referred to the Visiting Nurse Society for lying-in period.

Postnatal—features:

XII. The general care of the baby, supervised by nurses visiting the home; instructions, feeding, etc., by doctor at Centre; no age limit.

XIII. We cooperate with all Babies' Hospitals.

XV. Homeless babies are referred to the Children's Aid Society.

ALBERT CROSS, *Managing Director*

CHILDREN'S AID SOCIETY OF PENNSYLVANIA

Philadelphia

The Children's Aid Society of Pennsylvania for over 30 years has maintained a special department to prevent the separation of infants from destitute mothers. In addition to unmarried mothers, this work includes special work for deserted wives and for some married mothers whose husbands for one reason or another are incapacitated from giving them proper support. Instead of taking the children away from such mothers the Society provides situations for them in private families and otherwise assists them. This avoids their separation and at the same time enables the mother to become self-respecting and develops her responsibility for the welfare of her child. Good places in private families, usually in the suburbs or country, are found for them. The mother and child go together into the family and visitors from the Children's Aid Society continue friendly supervision. This plan provides a living for the mother and the child in addition to reasonable wages.

Careful personal attention is given to each applicant for help in this department. The Society seeks in each instance to make the very best plan for

both mother and child. Advice, direction and guidance, as well as medical care and treatment, and other forms of assistance are a part of the work. This plan has received the approval of a considerable number of child-caring organizations in Philadelphia who are now cooperating through the Children's Bureau of Philadelphia to continue this special work.

XV. In March, 1912, the Children's Aid Society established a Directory and Registration Bureau of Wet Nurses. During the year ending October 1, 1913, 39 nursing infants were placed with wet-nurses, and during the year ending October 1, 1914, 40 young infants were cared for in that way. For the year ending October 1, 1915, 36 babies were cared for by wet-nurses under the supervision of the society. In addition, on this date the society had in care 61 babies from one to two years of age. These are cared for in various private families, one to each home. Some are boarding out and others have been placed in families under supervision with a view to adoption.

These babies were dependent or neglected because the mother had died, deserted, become insane, or was in prison, or was sick. While the father in such cases was required to contribute to the support of the baby as far as possible, he was often unable himself to provide the right care. In the case of so-called foundlings and other deserted children, a careful inquiry was made in an attempt to locate the parents and relatives. This was done to safeguard the rights of babies and to prevent imposition upon charity.

Care in hospitals rather than in boarding homes was usually found to be best for dependent infants having syphilis or other communicable disease. Vaginitis in female infants, certain types of feeding cases, and other special conditions, on the advice of the physician were usually provided with hospital care in preference to a boarding home.

The Children's Aid Society believes that wet-nursing is preferable to artificial feeding for the newly-born dependent infant. We believe this is especially true of foundlings and particularly true during the summer months. The society finds wet-nurses by advertising and by the cooperation of doctors, visiting nurses, social settlements, and charitable organizations. All wet-nurses are carefully examined before they are certified. When a social worker has approved the home there is a general medical examination including the Wassermann, tuberculin, and other tests, and such other precautions as may be necessary to safeguard the infant. The same careful examination is given to the infant before placing, as well as to the wet-nurse's own baby, if it be living. When two babies are with the same nurse, special care is taken to see that both are properly nourished. Discrimination as to age and condition is used in assigning infants to wet-nurses.

Constant attention is given to the supervision of the wet-nurse after the infant is placed. A social worker maintains general oversight and regular calls by a trained visiting nurse, as well as medical direction, are a constant part of the plan. In addition to paying the wet-nurse according to her service suitable clothing is furnished for the infant.

A supervising physician decides when the baby is in suitable condition to be taken from the wet-nurse and given some other kind of care. Some infants may then be returned to the mother, who may have been sick, or may be placed with a relative. The majority, however, are usually homeless and friendless. Such infants when weaned are placed out for adoption or sent to board in families usually in the country.

Older infants from one to three years of age are sent direct to country boarding homes and under proper supervision are placed on artificial food. This plan is also used for some healthy young infants just past the early nursing stage when received. Thus, the boarding-out system makes it possible for the society to meet the needs of many different kinds of babies and to secure individual care for them until some permanent disposition is made.

Carefully selected free homes, with or without adoption, will often be the best solution for the permanent care of many of these infants. Until such homes are secured care by wet-nurses, and later by artificial feeding in country boarding homes, is shown by experience to be increasingly satisfactory. This method is being successfully used both to prevent infant mortality and also to put the infants in suitable condition to be offered for adoption.

Competent caretakers, discrimination in placing the children, constant supervision to assure proper food, cleanliness and general sanitary conditions are essential to good results. The progress of the child should be carefully noted as a guide for further treatment.

EDWIN D. SOLENBERGER, *General Secretary.*

STARR CENTRE ASSOCIATION

Neighborhood House, Baby Saving Station

Philadelphia

I.-II. The Starr Centre Association was organized under this name in 1897 and was incorporated under the laws of Pennsylvania in 1905. The work of its Baby Saving Station, which includes the Medical Dispensary and the Milk Station, is carried on all the year round.

III. The babies less than two years of age under care during the past three years have been as follows:

during year ending October 1, 1915.....847 babies
 during year ending October 1, 1914.....805 babies
 during year ending October 1, 1913.....682 babies

IV. The mothers reached have been practically all of Italian birth.

V. Our staff of workers was as follows during the three years named below:
 during the year ending October 1, 1915, two doctors, three nurses,
 one superintendent of Milk Station.
 during the year ending October 1, 1914, two doctors, two nurses,
 one superintendent of Milk Station.
 during the year ending October 1, 1913, one doctor, two nurses,
 one superintendent of Milk Station.

VI. The infant death rate in Philadelphia was as follows:

for the year ending December 31, 1914, 121.3 per 1,000 babies born
 alive.
 for the year ending December 31, 1910, 137.8 per 1,000 babies born
 alive.

VII. In 1903 the Starr Centre Association began to dispense at cost the modified milk prepared by the Philadelphia Modified Milk Society, in the hope of lessening the number of deaths from improper feeding. The milk sales grew rapidly, and the number of babies cared for increased from year to year. But with the years came also a realization that quality of work was more important than quantity, and greater and greater emphasis has been placed on the educational side of the work.

VIII. The prenatal work was started October 1, 1914. During the year closing October 1, 1915, we have instructed or cared for a total of 275 mothers, of whom 83 received "full care." These "full care" mothers were under care for at least three months each, cooperated well, and each permitted a thorough gynecological examination. Mothers have come to us from obstetrical dispensaries, hospitals, from our own postnatal department, etc.

The instruction of the mothers is given by our doctors and by our prenatal nurse. It covers mother's general care and personal hygiene, preparation for labor, preparation of babies' outfit, instruction as to need of medical advice and care in possible emergencies, etc.

The prenatal mothers receiving "full care" were under care for an average of four and one-half months each.

X. Of 83 cases receiving "full care" during the year ending October 1, 1915, 61 were carried to the end of pregnancy. Sixty babies were born alive, and one was born dead. One baby of the 60 born alive lived only a few minutes. At the end of one month after birth, 58 babies were breast-fed and one baby was partly breast-fed. The mother of this last baby was the only hemorrhage case during the year.

We have no direct relation with any maternity hospital, etc.

X. We are not able to make provision for the care of mothers during confinement, or to install caretaker, and we have no obstetrical nurse.

XII. We try to have each baby brought to the Baby Saving Station as soon as the mother is able to come. Many of our babies are brought when only a few days old. The baby is on its first visit thoroughly examined and advice given, or needed treatment secured for any observed abnormalities. We make every effort to have the baby come to the station for weighing, etc., each week until it is two years old. We have been very successful in teaching the mothers to nurse their babies. During the year ending October 1, 1915, 677 babies less than one year of age were cared for, of these babies 65.4 per cent were breast-fed, 13.1 per cent were partly breast-fed and only 21.4 were bottle-fed. The average monthly percentages for the past three years are very interesting.

Average monthly percentages of babies less than one year of age, classified as to method of feeding:

	Year Ending October 1, 1913	Year Ending October 1, 1914	Year Ending October 1, 1915
Breast-fed babies	48.5 per cent	65.7 per cent	73.6 per cent
Partly breast-fed babies.	26.9 per cent	14.0 per cent	8.1 per cent
Bottle-fed babies	24.4 per cent	20.2 per cent	18.1 per cent

We maintain a milk station for the sale of whole pasteurized milk on our doctors' prescriptions. Our nurses teach home modification in cases where breast feeding is not possible.

XIII. We have no direct relation with any hospital for babies, but we make use of all hospitals, etc.

X. We are not carrying on any special organized work for the prevention of blindness.

We can make no provision for homeless babies except by cooperation with other philanthropic agencies. We have no boarded out babies.

XVI. We have not developed any follow-up care for our babies over two years of age, except as they return to us in case of illness.

XVII. We have a Department of Child Hygiene in Philadelphia. For statement of its work, see report of "Baby Welfare Association." The Starr Centre is a member of this association.

XVIII. Our work has had only an indirect effect upon our Department of Health.

XIX. Child hygiene, etc., is taught in the public schools. This instruction is conducted by the Board of Education.

XX. All of our cases are registered at a central registration bureau to prevent duplication and overlapping. We also cooperate with other agencies in

individual cases, each organization doing the part of the work for which it is specially fitted.

XXII. Our prenatal work, including a weekly obstetric clinic was all newly organized during the year just closed.

XXIII. We do not use volunteer workers at all.

XXIV. Our Board of Directors has complete control of every phase of our work.

XXV. Our funds are raised by special appeals and annual donations. We receive no state, municipal or other public aid. Our direct expenditures during the past year, for our Baby Saving Station, were \$4,763. This amount did not include rent, janitor service, heat, light or other overhead expenses.

XXVI. Though we have no regular course of instruction, nurses in training are welcomed by us, and a number of such nurses have come from time to time to see our work in actual operation, and to learn what they can by practical observation.

ALBERT L. JONES, *General Secretary.*

ASSOCIATED CHARITIES OF GREATER JOHNSTOWN

Infant Welfare Work

Report for May, June, July, August, September, 1915.

Visits: To well babies, 1,105; to sick babies, 510; cooperation, 175. Total, 1,790.

Attendance at weekly clinics: Well babies, 390; sick babies, 117. Total attendance, 507.

Total number of cases reported, 187; sent to hospital, 17; died, 6. Amount of milk dispensed, 4,146 quarts. Total receipts (September payments not completed), \$71.43.

Statistics for the three months—June, July August—of infants' deaths under one year of age in Johnstown the past four years.

	June	July	August	Total
1912.....	18	47	35	100
1913.....	23	43	40	106
1914.....	13	29	36	80
1915.....	16	25	38	79

The Associated Charities employed two nurses during May and June; during the other three months they were taken over by the city. The expense of the summer work amounted to about \$1,000.

FEWER BABIES DIED

We lost only six babies out of a total of 187 in our care last summer. It will be remembered that the survey of Johnstown, made by the Children's Bureau of the Federal Government, disclosed the fact that the death rate per 1,000 babies under one year of age in Johnstown was as high as 134. Among Associated Charities clinic babies the mortality was brought down this summer to less than 60 per 1,000, under one year, estimating for a full year from the five months' report. This certainly shows the value of competent medical care and nursing in conserving our infant life. Of course the weather conditions during the past summer were unusually favorable and helped materially to keep down the

number of deaths. Our answer to the Children's Bureau is that we have attacked this problem with vigor and that the results shown are already very gratifying. We trust, in view of the record made, that the City Council at no distant day will see the necessity of employing at least one nurse the year round.

The infant welfare work this summer was under the direction of Drs. H. J. Cartin, C. B. Milhoff and L. L. Porch, who were appointed for the purpose by the Cambria County Medical Society. Valuable co-operation was also given by Dr. L. W. Jones, the City Health Officer.

The Associated Charities supplied all the milk and ice for the babies during the summer, the total cost being about \$675. The milk furnished was probably the best that could be secured. It came already iced from the Merryglade farm near Somerset and remained iced till the time it reached the babies. Close co-operation between the City Health Board, Council, physicians, nurses, milk dealers, Associated Charities and others made possible the excellent showing along baby-saving lines.

FRED W. CHURCH, *General Secretary.*

VISITING NURSE ASSOCIATION

York

I.-II. The association was organized in 1908; work is carried on all the year round.

III. Babies cared for

during the year 1913..... 92

during the year 1914.....136

during the year 1915..... 50

IV. There were 21 mothers reached during the year (prenatal).

V. Staff:

Doctors—1913, 2; 1914, 2; 1915, 1

Nurses —1913, 2; 1914, 3; 1915, 3

VII. The Visiting Nurse Association is the outgrowth of St. Ann's Guild, which was formed by a small number of women who met in a social way to sew for the poor. The original object of the Guild was to sew for the maternity ward in the York Hospital. The ladies of the Guild felt they were not doing enough and planned ways and means of raising money to branch out and do a bigger work. At first it was decided to start a day nursery, but the fund raised was too small for so big an undertaking, and it was decided to organize district nursing. The pioneer of the work gained her entrance into the homes of the people by making friends with the children and making friendly calls on the mothers. The work was carried on by one nurse for a year—then an assistant was procured and the work has steadily increased until at the present time the staff consists of a supervising nurse and two assistants.

An infant welfare station was started in 1913. A second infant welfare station was started in 1915 (colored). A Little Mothers' League was organized in June, 1915, with an enrollment of 55 members.

VIII. Prenatal work was started in June, 1915. The mothers come on their own accord, coming usually two or three months before confinement. Instruction is given in personal hygiene, diet, exercise and the baby's wardrobe.

X. We cooperate with the York County Hospital, the only hospital in the city; the West End Sanitarium, a thrifty private hospital.

XI. Our staff does not include an obstetrical nurse.

XII. We have no direct relations with hospitals for babies.

XIX. Ours is the only organization engaged in baby saving work.

XXI. We have enlarged our work in this way during the year: Have established a second infant welfare station (colored), organized a Little Mothers' League, started prenatal work, and established the Social Service Department in the York County Hospital.

XXII. Volunteer workers have been doing the friendly visiting in the homes of the patients without supervision. This winter we are to have supervised work, the supervising to be done by the superintendent of nurses. It is hoped to organize some of the members of the junior board into a Sunshine Society to visit the "shut-ins," others to give individual instruction to backward children.

XXV. Annual budget about \$3,000, raised by yearly subscription, appeal to the public, and a certain sum given by the city.

ELIZABETH KOB, *Superintendent of Nurses.*

PHILIPPINE ISLANDS

LIGA NACIONAL FILIPINA PARA LA PROTECCION DE LA PRIMERA INFANCIA

Manila

I-II. Organized on June 22nd, 1913. Work is carried on all the year round.

III. The babies cared for by our organization are: during the 11 months ending Sept. 1st, 1915, 1,172 babies from 0 to 2 years old and 290 babies 2 years old and upward; during the year ending Oct. 1st, 1914, 627 babies from 0 to 2 years old and 281 babies from 2 years old and upward; and during the time between June 3rd to Oct. 1st, 1913, 266 babies from 0 to 2 years old and 106 babies from 2 years old and upward.

IV. Number of mothers who came to our dispensaries during the 11 months ending Sept. 1st, 1915, 1,462 Filipinos, 1 Spaniard and 1 Japanese.

V. On our staff we have one doctor and one nurse.

VI. The infant death rate in the city of Manila per 1,000 births is for the year ending Dec. 30th, 1914, 356.80 and for the year ending Dec. 30th, 1910, 441.40.

VII. We started with one dispensary; now we have two. We give lectures on puericulture; the number of mothers is increasing every day attending it. Now we have a League of Little Mothers. Every year we publish two bulletins about some points on the care of babies. Our work is principally postnatal, but we have started prenatal work.

VIII. Prenatal: We started on June 3rd, 1915. The mothers come from their respective homes. We instruct them about the hygiene of pregnancy. The instruction is given by the doctor in the dispensaries and the nurse watches them in their homes to follow up the instruction. They are usually under our care during the last six months of the pregnancy and until the child is 2 years old.

IX. Among the babies we have cared for none died. All of our mothers nurse their babies.

A great many of our patients are delivered in hospitals or they call on the Government obstetrical department in order to have skilled obstetrical care in their homes.

A mother who had 8 babies who died before they were 3 months old, came to us for advice about the ninth baby who has since been under our care and who is now two years old.

We can give many examples like the above mentioned.

X. We have no direct connection with maternity hospitals. We recommend the patients to the day nurseries, the Gota de Leche, the Philippine General Hospital and the S. Juan de Dios Hospital.

XI. After the delivery we continue teaching them hygiene of confinement by having the doctor and nurse visit them. Our staff does not include obstetrical nurses.

XII. Our work is exclusively instructive but occasionally we treat the ill babies in our dispensaries. The babies under our care are from 0 to 2 years old, we also advise about older children if necessary.

XIV. We are not carrying on an organized campaign for the prevention of blindness but in the puericulture lectures given on Sundays, we devote some lectures to the prophylaxis of conjunctivitis.

XIX. Child hygiene does not have a separate place in the school program until the Fourth Grade of the primary course is reached. Before that time, however, informal instruction in hygiene and the care of the home is given. In Grade IV some of the subjects taught under infant or child hygiene are the following:

Infant's baths, infant's clothes, care of the nose, eyes, ears, mouth and teeth.

Food needs of children.

Sleeping habits.

Protecting children against insects.

Amount of sleep required by children.

The pupils in Grade IV receive instruction in other related subjects besides these mentioned.

In Grade III of the primary course, the industrial work begins to be differentiated and girls pay more attention to sewing and cooking. Among some of the subjects taken up are: beauty of the home, surroundings of the home, stables and out houses, closets, house pests, and care of the home.

Instruction in the above subjects in the primary grades is given by Filipino teachers who have had special training in the work which they teach.

In the three grades of the intermediate courses, all girls are given instruction in both infant hygiene and home making.

Instruction in the intermediate grades is given, as a rule, by Filipino teachers who have had special training for the work, but in a number of schools these subjects are still taught by American teachers.

XX. There are several organizations in Manila: the "Liga" teaches the mothers the scientific care of their babies. The "Gota de Leche" of Manila gives them the right kind of food until they reach two years old and the "Day Nursery" takes care of the laborer's babies during the mothers' working hours.

XXI. The fathers are often present when the mothers are instructed.

XXII. We started first with one dispensary and we have already two in Manila and one in the province to be inaugurated soon.

XXIII. Nearly all the work is carried by the doctor and the nurse in the dispensaries and in the homes according to the instruction of the Board of Directors.

We have a committee of ladies who distribute some help to the needy families.

XXV. Our annual budget is approximately P.7,500 to P.8,000.

Our funds are raised by annual subscription (about P.600), by donations (P.400) and by appropriations from the Government (P.7,000).

MANUEL S. GUERREBO, M. D., *Secretary*.

RHODE ISLAND

BABY WELFARE COMMITTEE

Providence

Baby welfare work in Providence is conducted through the Baby Welfare Committee, which is composed of representatives of the various charitable organizations supporting the consultations and the physicians and nurses in attendance at the same.

One new consultation was started in an Italian section of the city, this making a total of seven consultations conducted by the committee.

During the year 1914 approximately 1800 baby visits were recorded at the consultations and it is interesting to note that in the first nine of the present year the total number of visits has already exceeded that of the previous twelve months.

Much valuable information is being dispensed freely and the results obtained in training mothers in the thickly congested sections of the city are very satisfactory. The Providence District Nursing Association has very kindly provided us with nurses to assist in the work and their efficient aid in the homes is responsible in no small degree for the good which is coming from this excellent charity.

HENRY E. UTTER, M. D., *Secretary*.

DISTRICT NURSING ASSOCIATION

CHILD WELFARE WORK

Providence

I-II. The Providence District Nursing Association, was organized in June 1900. The work is carried on all the year round.

III. The number of babies cared for by this Association

during the year ending October 1, 1915.....	2,825
during the year ending October 1, 1914.....	2,434
during the year ending October 1, 1913.....	2,332

V. The staff of the District Nursing Association is comprised of thirty-five nurses, eight of whom are engaged in child welfare work.

The infant death rate in this City

for the year ending Dec. 30, 1914.....	115
for the year ending Dec. 30, 1910.....	145

VII-IX. The child welfare nurses carry on the prenatal work and after confinement the case is turned over to the general visiting nurse in the district for bedside nursing care. The baby is then taken on by the children's nurse and kept under supervision.

The prenatal work was started in June 1914. The calls are received from physicians, a list is received of all patients applying for admission to the Lying-In Hospital, a number of calls come from the patients themselves and many are found by the nurses on their daily rounds.

The instruction includes advice and suggestions to the mothers in regard to diet, dress, rest and general condition. Urinary examinations can be made by the City Health Department.

The mother is under observation from two to nine months.

X. There is one Lying-In Hospital in Providence. This hospital sends us a list of all patients applying for admission and also a list of all patients discharged from the hospital.

XI. Providence has no maternity out-patient department but the hospital hopes to establish one very soon.

XII. The general nurses on the staff give postnatal care to all cases, visiting the mother once, or twice a day if necessary, giving her bedside care and washing and dressing the baby. A specialty is not made of obstetrical work. They are cared for by the general nurse in connection with all other diseases, except infectious or contagious.

The children's nurses keep their babies under supervision from birth till school age.

XIII. Providence has no hospital for babies. The Rhode Island Hospital has a ward for infants.

XIV. There is no special organization for the prevention of blindness being carried on in Providence.

The Providence City Health Department employs one nurse to investigate every birth reported by midwives. We consider the work of this nurse a strong factor in preventing blindness.

XV. The only provision that can be made for homeless babies is to send them to an infant or orphan asylum.

The City Health Department employs a nurse who investigates and visits regularly all infant boarding houses. This department has for its ideal, the one child per home system, and is working towards that end.

XVII. The Health Department has a Department of Child Hygiene, the Superintendent of which is Dr. Ellen A. Stone.

The scope of its work is medical supervision of school children, for which in addition to medical inspectors, eight nurses are employed. This Department also has for its aim the prevention of infant mortality through its supervision of infant boarding houses, also the prevention of blindness through the early looking up of births reported by midwives.

The Providence District Nursing Association while not affiliated with the Health Department is in very close touch with it and we have very strong-cooperation.

The supervision and investigation of infant boarding houses was started and carried on by the District Nursing Association for four years, and the early visiting and following up of births reported by midwives was started and done by the Association for six months.

Both these branches of infant welfare work are now being done by the City Health Department.

XIX. Child hygiene is taught by the public schools to a small extent by the school nurses to girls ranging in years from twelve to fourteen. Courses in home-making are given at a home school to girls above the fifth grade. There is only one such school at present, but we are hoping to open a second one very soon.

XXI. No systematic instruction for the fathers has been carried on.

XXIII. As yet, volunteer workers have not been made use of successfully.

XXV. The annual budget is about \$35,000. It is raised as follows: Annual subscriptions and voluntary contributions, receipts from patients, Metropolitan Life Insurance Company, and by an annual donation or tag day. The Association has received no appropriation from the City or State.

XXVI. An arrangement exists with the hospitals whereby their pupil nurses come to us for special training and instruction in public health work. As the time spent with the Association ranges from six weeks to two months, we are unable to give them anything definite in our child welfare department. They, however, come in close touch with the child welfare nurses and attend our weekly conferences, many of which are pertaining to this branch of work.

Most of the rural communities in Rhode Island have a visiting nurse, whose work includes beside general visiting nurse work, the care of tuberculous patients and the care and instruction of mothers as to how to care for their babies.

RHODE ISLAND BRANCH NATIONAL CONGRESS OF MOTHERS AND PARENT-TEACHER ASSOCIATION

CHILD HYGIENE COMMITTEE

Providence

Our work is one of cooperation. We cooperate with the City Health Department and District Nursing Association and Baby Welfare Committee in maintaining free consultations for babies six of which are under our support. Where needed and when we can we supply lay helpers at the consultations. We advise every Mothers Club to set aside two meetings a year at least to papers on health topics, sometimes giving those papers ourselves or advising calling upon the physicians or district nurses. We own a film on "Better Babies" and loan it extensively. Have distributed several thousand copies of baby literature.

We are establishing "Penny Lunches" in the schools and hope before long to establish a prenatal clinic.

JEANNETTE GARDNER HEATH, *Chairman.*

WISCONSIN

DIVISION OF CHILD WELFARE OF THE HEALTH DEPARTMENT

Milwaukee

II. Organized 1912. Work carried on all the year round.

III. Babies cared for:

1915.....3440

1914.....2632

1913.....2480

IV. Mothers reached.....1915.....3420, representing all nationalities.

V. Staff:

	Doctors	Nurses
1915	28	14
1914	19	12
1913	19	9

VIII. Prenatal work was started in 1913. Since then 1442 mothers have been cared for. Instruction is given by the nurses. The average time under our care is six months.

XI. Mothers who cannot be cared for at home are referred to the Marquette Medical University.

XV. Homeless babies are referred to the Home for Dependent Children at Wauwatosa, Wisconsin.

XIX. Courses in child hygiene and home-making are given in the public schools by the child welfare nurses.

XXV. Budget \$22,420.

E. T. LOBEDAN, M. D., *Director Division of Child Hygiene.*

INFANTS' HOME AND HOSPITAL

Milwaukee

I-II. The Milwaukee Infant's Home and Hospital was incorporated 1882. The work is carried on all of the year around.

It gives hospital care to about one hundred and thirteen (113) babies annually.

All mothers are reached through our out patient department as the home conditions are investigated and corrected while the baby is in the hospital. All nationalities represented in our foreign elements are numbered about equally among the patients.

V. The staff is composed of seven physicians. There are two graduate nurses on the faculty and one child welfare nurse supplied by the city who is receiving three months of post graduate instruction. There is also a training school for nursery maids in connection with the hospital in which there are twelve nursery maids.

VI. The infant death rate in this city for the year ending December 30th, 1914 was 107 between ages of one and five years. For the year ending December 30th, 1910, was 128 between ages of one and five years.

VII. In September 1914 a dispensary was opened for the care of out patients and the instruction of mothers. There are two dispensary days a week on which the children are brought back for examination by our dispensary physician, thus continuing the work begun in the hospital. We keep in touch with the babies until they are two years of age and longer if they are not in good physical condition. A new modern hospital is in the course of construction which when completed will double our capacity and give us the facilities for carrying on prenatal and postnatal work. At present we are not carrying on prenatal or postnatal work.

XX. The Child Welfare Department of the City and the Visiting Nurses Association are both engaged in baby saving work.

XXV. Annual budget, \$8,000 a year. The funds are raised by annual subscriptions, special appeals, an annual charity ball and some bequests and endowed beds.

NAN DINNEEN, *Superintendent*

WISCONSIN ANTI-TUBERCULOSIS ASSOCIATION

Milwaukee

II. Organized in 1908. Work carried on entire year. Department of Child Welfare organized August, 1915. Work to be carried on all year.

VII. Our Child Welfare Department was established this summer. Work so far has been concentrated on a study of the infant mortality of the state of Wisconsin—not previously gone into. Interesting facts are coming to light.

This department is financed as part of the Wisconsin Anti-Tuberculosis Association a private organization, with funds raised by annual Christmas seal sale.

A superficial study of four cities in Wisconsin, (Green Bay, Racine, Fond du Lac, Sheboygan) made early in the summer, disclosed the fact that the Wisconsin problem differed widely from the generally accepted theory of baby problems. Therefore, a regular department was begun, and a staff-member engaged to do this work. To begin with, the facts were necessary. So the past two months have been spent by her in gathering the statistics of infant mortality in the state—rate, causes influential factors, etc—and compiling them.

We hope, by the first of the year, to establish a constructive program to work out. It will doubtless be mainly educational and we hope to make it state wide.

We have a Child Welfare Division in our Health Exhibit. This exhibit is sent to all communities in the state, especially during such times as they have community institutes, county fairs, teachers' conventions, nurses' conferences, etc. Our exhibit has been attracting considerable attention and has given valuable suggestions to the interested individuals and organizations of the various communities.

HOYT E. DEARBOLT, M. D., *Executive Secretary*

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY

MEMBERSHIP LIST 1915

Honorary

France

Bertillon, Dr. Jacques.....Paris

GENERAL MEMBERSHIP

LIFE MEMBERS

Ford, Miss Stella D., Detroit, Mich.
Gitchell, Miss Katherine, Akron, Ohio
Hanna, Mr. and Mrs. H. M., Cleveland, Ohio
Holt, Dr. L. Emmett, New York City
Knox, Mrs. J. H. Mason, Jr., Baltimore, Md.
Knox, Miss Katherine Bowdoin, Baltimore, Md.
Knox, J. H. Mason, 3rd, Baltimore, Md.
Mellon, Mr. A. W., Pittsburgh, Pa.
Oliver, Mr. Wm. B., Baltimore, Md.
Shevlin, Mrs. Thomas, Minneapolis, Minn.
Stotesbury, Mrs. Edward T., Philadelphia, Pa.
Volker, Mr. Wm., Kansas City, Mo.
Wade, Mr. and Mrs. J. H., Cleveland, Ohio
White, Mr. R. J., Baltimore, Md.
I. W.

AFFILIATED SOCIETIES

Canada

HAMILTON
Babies' Dispensary Guild
MONTREAL
University Settlement Milk Station

OFFICIAL DELEGATES

Miss Helen R. Macdonald
Miss K. Carr

California

SAN FRANCISCO
Certified Milk and Baby Hygiene Committee
California Association of Collegiate Alumnae

Connecticut

HARTFORD
Connecticut Children's Aid Society
NEW HAVEN
Infant Welfare Association
WATERBURY
Visiting Nurse Association

Miss Abbie M. Gilbert
Miss Edith Madeira

District of Columbia

WASHINGTON
Columbia and Children's Alumnae Association
Diet Kitchen Association
Graduate Nurses' Association of the District of Columbia
Instructive Visiting Nurse Society

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Miss Elizabeth G. Fox

Florida

JACKSONVILLE
Infant Welfare Society of Jacksonville
State Board of Health

Georgia**ATLANTA**

Georgia State Association of Graduate Nurses

COLUMBUS

City Federation of Women's Clubs

Illinois**CHICAGO**

Infant Welfare Society

Mothers' Aid of the Chicago Lying-In Hospital and Dispensary

Woman's Club

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Infant Welfare Station (Emma Matthieson Chancellor Memorial)

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Miss Phelan**Indiana****INDIANAPOLIS**

Children's Aid Association

SOUTH BEND

Children's Free Dispensary and Hospital Association

Iowa**BURLINGTON**

Child Welfare Committee of the Red Cross

SIOUX CITY

State Association of Registered Nurses

Kansas**WICHITA**

Christian Service League of America

Kentucky**LEXINGTON**

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Babies' Milk Fund Association

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Child Welfare Association

OFFICIAL DELEGATES**Maryland****BALTIMORE**

Council Milk and Ice Fund

Department of Health

Maryland Association for Study and Prevention of Infant Mortality (Babies' Milk Fund Association)

Maryland Society for the Prevention of Blindness

Miss M. F. Etchberger

CUMBERLAND

Baby Welfare Section of the Civic Club of Cumberland

Massachusetts**ANDOVER**

Massachusetts Branch Congress of Mothers and Parent-Teacher Association

BOSTON

Children's Aid Society

Children's Friend Society

Committee on Prenatal and Obstetrical Care, Women's Municipal League

Floating Hospital

Instructive District Nursing Association

Massachusetts Milk Consumers' Association

Maverick Dispensary

Milk and Baby Hygiene Association

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Miss Mary Beard

Mrs. Wm. Lowell Putnam

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Society for Helping Destitute Mothers and Infants

CAMBRIDGE

Avon Home

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Infant Hygiene Association

LEXINGTON

Unity Lend-a-Hand Society

SPRINGFIELD

Baby Feeding Association

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Michigan

ANN ARBOR

States Nurses' Association

BATTLE CREEK

Alumnae Association Battle Creek Sanitarium Training

School for Nurses

Michigan Sanitarium and Benevolent Association

Race Betterment Conference

Dr. J. H. Kellogg

DETROIT

Babies' Milk Fund

Children's Free Hospital Association

Dr. Thomas B. Cooley
Dr. B. Raymond Hoobler
Mrs. Abner E. Larned
Miss Betsy L. Harris

Farrand Training School Alumnae Association

Visiting Nurse Association

Dr. Thomas B. Cooley

GRAND RAPIDS

Clinic for Infant Feeding of the D. A. Blodgett Home

Dr. Collins H. Johnston
Miss Enid M. Bailey
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Social Welfare Association

PETOSKEY

Michigan State Nurses' Association

Minnesota

DULUTH

Infant Welfare Department

Duluth Consistory Scottish Rite Masons

MINNEAPOLIS

Infant Welfare Society

ST. PAUL

Baby Welfare Association

Minnesota Public Health Association

Missouri

ST. JOSEPH

Baby Welfare Association

ST. LOUIS

Children's Hospital

Missouri State Nurses' Association

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GREAT FALLS

Montana State Association of Nurses

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Berlin Mills Company's District Nurse

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Infant Aid Association

New Jersey

EAST ORANGE

Free Public Library

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New Jersey Congress of Mothers

MONTCLAIR

Board of Health

St. Vincent's Nursery and Babies' Hospital

NEWARK

Babies' Hospital

Babies' Hospital Milk Dispensary

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Diet Kitchen of the Oranges

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Mrs. Alexander Marcy

Dr. Elizabeth Mercelis
Miss B. A. Bain
Dr. M. J. SynnottDr. Henry L. Coit
Miss Clara E. Watkins
Dr. Henry L. Coit
Miss Clara E. Watkins

New York

ALBANY

St. Margaret's House and Hospital

BINGHAMTON

Child Welfare Association

Miss Viola M. Lee

BROOKLYN

Bureau of Charities District Nursing Committee

Children's Aid Society

Pediatric Society

Mr. Arthur Wakeman

BUFFALO

Babies' Milk Dispensary

NEW YORK

American Nurses' Association

Babies' Dairy Association

Babies' Hospital

Babies' Welfare Association

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Bureau of Educational Nursing, New York Association
for Improving Condition of the Poor

Miss LeLacheur

Bureau of Municipal Research

Camp Fire Girls

Children's Welfare Division Bellevue Hospital Social

Service Department

Hebrew Infant Asylum

Dr. A. F. Hess

Henry Street Settlement

Jacobi Hospital for Children

Metropolitan Life Insurance Company, Industrial Dept.

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Dr. Lee K. Frankel

Dr. J. Clifton Edgar

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Miss S. Lillian Clayton

National League of Nursing Education

National Organization for Public Health Nursing

New York Association for Improving the Condition of
the Poor, Bureau of Social Welfare

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New York Diet Kitchen Association

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New York Maternity Polyclinic

New York Milk Committee

State Nurses' Association

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Sub-Committee on Mothers and Infants, New York State

Charities Aid Association

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NIAGARA FALLS

Child Welfare Association

Dr. Carl G. Leo-Wolf

ROCHESTER

Bureau of Health

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Infant Welfare Committee

UTICA

Baby Welfare Committee

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North Carolina

RALEIGH

State Board of Health

Dr. W. S. Rankin

North Dakota

FARGO

Associated Charities

Ohio

CINCINNATI

Children's Clinic of the Ohio-Miami Medical College

Home for the Friendless and Foundlings

Jewish Infant Welfare Circle

Visiting Nurse Association.

Miss Elizabeth Cocke

CLEVELAND

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Dr. H. J. Gerstenberger

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Graduate Nurses' Association

Visiting Nurse Association

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COLUMBUS

Instructive District Nursing Association

TOLEDO

State Association of Graduate Nurses

Miss Tappan

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PHILADELPHIA

Association of Day Nurseries

Babies' Hospital

Babies' Welfare Association

Child Federation

Children's Aid Society of Pennsylvania

Children's Hospital

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Federal Council of Churches, National Temperance

Union

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READING

Visiting Nurse Association

WILKES-BARRE

Visiting Nurse Association

YORK

Visiting Nurse Association

Miss Elizabeth Kob

Philippine Islands**MANILA**

Liga Nacional Filipino para la Proteccion de la Primera Infancia

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Rhode Island Branch National Congress of Mothers and

Parent-Teacher Association

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Baby Welfare Committee

District Nursing Association

Mothers' Club

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Utah**SALT LAKE CITY**

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Visiting Nurse Association

MILWAUKEE

Children's Free Hospital

Division of Child Hygiene, Department of Health

Infants' Hospital

Milwaukee Maternity Hospital and Free Dispensary Association

Visiting Nurse Association

Wisconsin Anti-Tuberculosis Association

Dr. J. Gurney Taylor

Dr. Taylor

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Hume, Dr. Edward H.....	The Yale Hospital, Changsha
Magee, Mr. John G.....	Nanking

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James, The Hon. Mrs. Bernard R.....	Fingest Grove, High Wycombe, Bucks
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Perkins, Dr. J. H.....	The Hydro, College Green, Bristol

New Zealand

Campbell, Miss Annie D.....	Karitane-Harris Hospital, Anderson's Bay, Dunedin
Jenkins, Mr. William.....	850 Cumberland St., Dunedin

Canada

Babies Dispensary Guild (Afil.)	12 Euclid Ave., Hamilton, Ontario
Blackader, Dr. A. D.	236 Mountain St., Montreal
Brown, Dr. Alan	440 Avenue Road, Toronto
Campbell, Dr. George A., Director, Division of Child Hygiene, Dept. of Public Health	459 Avenue Road, Toronto
Fitzgerald, Miss I. Geraldine	281 Sherbourne St., Toronto
Hastings, Dr. Charles J., Medical Officer of Health	252 Russell Hill Road, Toronto
McCullough, Dr. John W., Secretary, Provincial Board of Health	Toronto, Ontario
MacMurchy, Dr. Helen	133 East Bloor St., Toronto
Mackenzie, Miss Mary A.	578 Somerset St., Ottawa
Milk Station, University Settlement of Montreal (Afil.)	179 Dorchester St., W. Montreal
Moody, Dr. A. W.	430 1/2 Main St., Winnipeg Manitoba
Patterson, Miss Mary D., R. N.	City Hall, Calgary, Alberta
Pelletier, Dr. Elmer, Secretary, Board of Health	Province of Quebec, Montreal
Wilson, Miss Frederica, Lady Superintendent, Winnipeg General Hospital Training Schools for Nurses	Winnipeg, Manitoba

Hawaii

Pratt, Dr. John S. B., Secretary, Territorial
Board of Health.....P. O. Box 1364, Honolulu

Panama

Brakemeier, Miss Louise.....	Hospital Santo Tomas, Panama City, Ancon
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Philippine Islands

Liga Nacional Filipina para la Proteccion de la Primera Infancia (Afili.)	423 San Pedro, Quiapo, Manila
Musgrave, Dr. E. W.	Phil. Gen. Hospital, Manila
Polk, Miss Mary.	Bureau of Science, Manila

Alabama

Parke, Dr. Thomas D.....415 1st Nat. Bank Bldg., Birmingham
Phelan, Miss Sarah E.....1336 14th Ave., S. Birmingham

California

Ainley, Dr. Frank C.	1118 Brockman Bldg., Los Angeles
Ash, Dr. Rachel L.	Galen Bldg., San Francisco
Breed, Miss Josephine L., R. N.	Municipal Pure Milk Station, Room 11, Temple Block, Los Angeles
Brown, Dr. Adelaide.	240 Stockton St., San Francisco
Certified Milk and Baby Hygiene Committee Association of Collegiate Alumnae (Affil.)	San Francisco
Davidson, Mrs. Addie M.	997 Western Ave., Los Angeles
Curtis, Mr. Henry S.	University of California, Casa Verdugo
Fleischner, Dr. E. C.	350 Post St., San Francisco
Franklin, Miss H. Grace, Supt. Children's Hos- pital Society of Los Angeles	Los Angeles
Gates, Dr. Amelia L.	S. W. Cor. Hyde and Bush Sts., San Francisco
Goethe, Mr. C. M.	Inverness Bldg., Sacramento
Graupner, Mrs. A. E.	2009 Jackson St., San Francisco
Gray, Mr. R. S.	Commonwealth Club, 153 Kearney St., San Francisco
Johnson, Dr. P. V. K.	820 Security Bldg., Los Angeles
King, Dr. Charles Lee	70 S. Euclid Ave., Pasadena
Lewitt, Dr. Wm. B.	210 Post St., San Francisco
Lucas, Dr. Wm. Palmer, University of California Medical School	Second and Parnassus Aves., San Fran- cisco
McCleave, Dr. Thomas C.	Federal Realty Bldg., Oakland
McDuffie, Mrs. Duncan	156 The Tunnel Road, Berkeley
McIntosh, Mrs. C. K.	Redwood City
Mattison, Dr. S. J.	707 Citizens Savings Bank Bldg., Pasa- dena
Moffitt, Dr. Herbert C.	240 Stockton St., San Francisco
Porter, Dr. R. Langley	44 Commonwealth Ave., San Francisco
Powers, Dr. L. M., Commissioner of Health	1022 N. Alvarado St., Los Angeles
Smith, Dr. Dudley	Hotel Oakland, Oakland
Strietmann, Dr. Wm. H.	Federal Realty Bldg., Oakland
Tevis, Mrs. Wm. S.	Box 747, Bakersfield
Thum, Mr. William	Pasadena
Titworth, Mr. Frederick S.	Box 27, La Jolla
Willitts, Dr. Emma K.	Galen Bldg., San Francisco
Wright, Miss Bertha, Chief Nurse, Baby Hospital	2420 Durant Ave., Berkeley

Colorado

Amesse, Dr. J. W.	Metropolitan Bldg., Denver
Gegenbach, Dr. Frank P.	1434 Glenarm Place, Denver
Ramaley, Mr. Francis	University of Colorado, Boulder
Whitney, Dr. H. B.	320 Temple St., Denver

Connecticut

Anderson, Dr. H. G.	Waterbury
Bartlett, Mrs. C. J.	183 Bishop St., New Haven
Bennett, Mrs. Winchester	76 Everit St., New Haven
Bronsky, Miss Mary W. B.	85 Congress Ave., Waterbury
Bronson, Miss Margaret L.	438 Whitney Ave., New Haven
Carle, Mr. Robert W.	P. O. Drawer D., New Haven
Carmalt, Dr. W. H.	261 St. Roman St., New Haven
Connecticut Children's Aid Society (Affil.)	60 Brown-Thomson Bldg., Hartford
Fisher, Prof. and Mrs. Irving	460 Prospect St., New Haven
Goodenough, Dr. E. W.	44 Leavenworth St., Waterbury
Goodrich, Dr. Charles A.	5 Haynes St., Hartford
Gregory, Mrs. A. W.	63 Gillett St., Hartford
Hillyer, Mrs. A. R.	91 Elm St., Hartford
Infant Welfare Association of New Haven (Affil.)	200 Orange St., New Haven
Linde, Dr. Joseph I.	163 York St., New Haven
McLellan, Dr. E. A., Health Officer, Department of Health	Bridgeport
Madeira, Miss Edith, Supt. Visiting Nurse Asso- ciation	37 Central Ave., Waterbury
Mead, Dr. Kate C.	165 Broad St., Middletown
Perkins, Miss Charlotte E., Supt. The Babies' Hospital	243 Market St., Hartford
Rockefeller, Mrs. F. A.	Greenwich

Siemons, Dr. J. Morris.....	284 Orange St., New Haven
Snowden, Miss Ada, R. N., Public Health Nurse.....	Litchfield
Steele, Dr. H. Merriman.....	226 Church St., New Haven
Steiner, Dr. W. R.....	4 Trinity St., Hartford
Talcott, Mrs. George Sherman.....	58 Franklin Sq., New Britain
Waterbury Visiting Nurse Association (Affil.).....	37 Central Ave., Waterbury
Wilkinson, Miss Martha J.....	34 Charter Oak Ave., Hartford
Winslow, Prof. C.-E. A.	Yale Medical School, New Haven

Delaware

Wales, Dr. G. T.....	Delaware Ave. and Woodland, Wilmington
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District of Columbia

Acker, Dr. George N.....	913 Ave. of the Presidents, Washington
Adams, Dr. Samuel S.....	1 Dupont Circle, Washington
Alsberg, Dr. Carl L., Chief, Bureau of Chemistry, Department of Agriculture.....	Washington
Babbitt, Miss Ellen C.....	1666 Park Road, Washington
Boyd, Dr. George W.....	121 Second St., N. W., Washington
Brickenstein, Mr. J. H.....	918 F Street, Washington
Calvin, Mrs. Henrietta W., Bureau of Education, Department of the Interior.....	Washington
Columbia and Children's Alumnae Association (Affil.)	1337 K Street, N. W., Washington
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Gardner, Miss Helen W., R. N.....	2 Dupont Circle, Washington
Graduate Nurses' Association of the District of Columbia (Affil.)	1337 K Street, N. W., Washington
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Heald, Mrs. Edward C.....	1617 Riggs Place, Washington
Heurich, Mrs. Christian.....	1307 New Hampshire Ave., Washington
Instructive Visiting Nurse Society (Affil.).....	2506 K Street, N. W., Washington
Kerr, Dr. J. W.....	U. S. Public Health Service, Wash- ington
Kober, Dr. George M.....	1819 Q Street, N. W., Washington
Langworthy, Mr. Charles Ford.....	Department of Agriculture, Washington
Lappin, Mr. Richard C., Chief Statistician, Divi- sion of Vital Statistics, Bureau of the Census.....	Washington
Lathrop, Miss Julia C., Chief, Federal Children's Bureau	Washington
Lewis, Mrs. Fulton.....	1669 31st St., Washington
Meigs, Dr. Grace L., Adviser on Health and Hygiene, Federal Children's Bureau.....	Washington
Merrill, Dr. Theodore C.....	Room 509, Bureau of Chemistry, Wash- ington
Neivins, Miss Georgia M., Supt. Garfield Memorial Hospital	Washington
Newton, Mrs. Elsie Eaton, Supervisor, U. S. Indian Service.....	Washington
Overton, Mrs. W. S.....	2 Dupont Circle, Washington
Pfender, Dr. Charles A.....	304 Rhode Island Ave., N. W., Wash- ington
Saville, Miss Catherine.....	1420 17th Street, N. W., Washington
Schereschewsky, Dr. J. W.....	U. S. Public Health Service, Washing- ton
Simon, Mrs. Louis A.....	1634 Riggs Place, Washington
Skinner, Dr. J. C., Supt., Columbia Hospital for Women	Washington
Stetson, Rev. C. R., St. Mark's Church.....	301 A Street, S. E., Washington
Strong, Miss Isabel.....	2001 L Street, N. W., Washington
Totten, Miss Edith.....	1708 I Street, Washington
Van Schaick, Dr. John, Jr.....	1417 Mass. Ave., N. W., Washington
Wall, Dr. Joseph S.....	2017 Columbia Road, Washington
Washington Diet Kitchen Association (Affil.).....	1322 Twenty-Eight Street, Washington
West, Mrs. Max.....	Federal Children's Bureau, Washington
Wheeler, Miss Estelle L., Supt., Washington Diet Kitchen Association.....	1322 Twenty-Eight Street, Washington
White, Dr. Davenport	The Dresden, Washington
Wilson, Mrs. Huntington.....	1608 K Street, Washington
Woodward, Dr. Wm. C., Health Officer, Muni- cipal Bldg.	Washington

Florida

Jacksonville Infant Welfare Society (Affil.).....Bisbee Bldg., Jacksonville
 State Board of Health (Affil.).....Tallahassee
 Terry, Dr. C. E., City Health Officer.....Jacksonville

Georgia

Boyd, Mrs. W. N.....194 Washington Street, Atlanta
 City Federation of Women's Clubs (Affil.).....1700 4th Ave., Columbus
 Funkhouser, Dr. W. L.....Rome
 Georgia State Association of Graduate Nurses
 (Affil.).....Atlanta
 Rhodes, Dr. C. A.....Atlanta

Illinois

Abt, Dr. Isaac A.....4810 Kenwood Ave., Chicago
 Addams, Miss Jane.....Hull House, Chicago
 Ahrens, Miss Minnie H., Supt., Infant Welfare
 Society of Chicago.....104 S. Michigan Ave., Chicago
 Amberg, Dr. Samuel.....Children's Memorial Hospital, Chicago
 Atkinson, Mrs. Charles.....Lake Forest
 Bailey, Mr. Edward P.....Chicago Savings Bank and Trust Com-
 pany, Chicago
 Bell, Mrs. Laird.....31 Scott St., Chicago
 Bowen, Mrs. Louise de Koven.....1430 Astor St., Chicago
 Burling, Mrs. Edward.....Hubbard Woods
 Casselberry, Mrs. Lillian H.....1830 Calumet Ave., Chicago
 Churchill, Dr. F. S.....1259 N. State St., Chicago
 DeLee, Dr. J. B.....5028 Ellis Ave., Chicago
 Dunn, Mrs. Morrill.....125 E. Chestnut St., Chicago
 Earnshaw, Mr. G. F., President, Earnshaw Knit-
 ting Co.....1201 W. Jackson Blvd., Chicago
 Evans, Dr. W. A.....Chicago Tribune, Chicago
 Farwell, Mrs. Fanny D.....Lake Forest
 Gill, Dr. John Joseph.....5708 Harper Hospital, Chicago
 Grulee, Dr. Clifford G.....3974 Lake Ave., Chicago
 Hay, Mrs. W. L.....3300 Michigan Ave., Chicago
 Hedger, Dr. Caroline.....29 E. Madison St., Chicago
 Heinemann, Dr. Paul G.....University of Chicago, Chicago
 Helmholz, Dr. Henry F.....1015 Michigan Ave., Evanston
 Hess, Dr. Julius H.....5574 Indiana Ave., Chicago
 Heyworth, Mrs. James C.....Lake Forest
 Hilton, Mr. Henry H.....2301 Prairie Ave., Chicago
 Infant Welfare Society of Chicago (Affil.).....104 S. Michigan Ave., Chicago
 Jordan, Prof. Edwin O.....University of Chicago, Chicago
 Kingsley, Mr. Sherman C., Director, Elizabeth
 McCormick Memorial Fund.....315 Plymouth Court, Chicago
 Kirk, Mrs. Walter.....76 E. Cedar St., Chicago
 La Salle Infant Welfare Station (Emma Mat-
 thiesen Chancellor Memorial) (Affil.).....La Salle
 Lathrop, Mr. Bryan.....407 S. Dearborn St., Chicago
 Lindsay, Miss Mary B., Librarian, Evanston
 Public Library.....Evanston
 McCormick, Mrs. Harriet H.....50 E. Huron St., Chicago
 McCormick, Mr. Harold F.....Stock Exchange Bldg., Chicago
 McCormick, Mrs. Medill.....500 Diversey Parkway, Chicago
 McLaury, Mrs. C. W.....4801 Greenwood Ave., Chicago
 Mackay, Miss Mary A.....1910 Calumet Ave., Chicago
 Meyer, Mr. Alfred C.....843 W. Adams St., Chicago
 Michael, Dr. May.....4625 Prairie Ave., Chicago
 Milligan, Dr. Josephine.....610 W. State St., Jacksonville
 Mother's Aid of the Chicago Lying-In Hospital
 and Dispensary (Affil.).....Chicago
 Neff, Miss Berte.....1417 W. Jackson Blvd., Chicago
 Poole, Mrs. R. H.....Lake Forest
 Rew, Mrs. Irwin.....1128 Ridge Ave., Evanston
 Rosenwald, Mr. Julius.....% Sears, Roebuck & Co., Chicago
 Scott, Mrs. Frederick H.....175 Sheridan Road, Hubbard Woods
 Scott, Mrs. Robert L.....404 Lake Ave., Evanston
 Shaw, Mrs. Howard Van Doren.....1130 Lake Shore Drive, Chicago

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Teter, Mr. Lucius.....	5637 Woodlawn Ave., Chicago
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Webster, Dr. George W.....	30 N. Michigan Blvd., Chicago
Wheeler, Miss Ruth.....	University of Illinois, Urbana
Woman's Club (Affil.).....	410 S. Michigan Ave., Chicago
Wynekoop, Dr. A. L. Lindsay.....	3406 W. Monroe St., Chicago

Indiana

Burckhardt, Dr. Louis.....	Hume-Mansur Bldg., Indianapolis
Children's Aid Association (Affil.).....	62-63 Baldwin Block, Indianapolis
Children's Dispensary and Hospital Association (Affil.).....	1031 W. Division St., South Bend
Diven, Dr. John.....	201 Penway Bldg., Indianapolis
Mumford, Dr. E. B.....	504 Newton-Claypool Bldg., Indiana- polis
Rappaport, Mr. Leo M.....	822 Law Bldg., Indianapolis
Warmington, Miss Mary Grace.....	1700 Adams St., Gary

Iowa

Belfeld, Dr. Albert H.....	State University of Iowa, Iowa City
Child Welfare Committee of the Red Cross (Affil.).....	502 1/2 Jefferson St., Burlington
Iowa State Association of Registered Nurses, (Affil.).....	Sioux City
MacKay, Miss Catherine J.....	Iowa State College of Agricultural Arts, Ames
Meanes, Dr. Lenna L.....	Securities Bldg., Des Moines
Moore, Dr. Fred.....	1217 Equitable Bldg., Des Moines
Perkins, Mrs. M. Russell.....	Burlington
Sherbon, Dr. Florence Brown.....	Colfax
Sinclair, Miss Amy.....	800 Second Ave., Cedar Rapids

Kansas

Abbey, Dr. Frank L.....	Newton
Christian Service League of America (Affil.).....	113 N. Lawrence Ave., Wichita
Crumbine, Dr. S. J., Secretary, State Board of Health.....	Topeka
Hosford, Mr. George Lewis.....	113 N. Lawrence Ave., Wichita
Menninger, Dr. C. F.....	727 Kansas Ave., Topeka
Thomas, Mrs. Charles B.....	913 Polk St., Topeka

Kentucky

Babies' Milk Fund Association of Louisville (Affil.).....	215 E. Walnut St., Louisville
Baby's Milk Fund Association of Lexington (Affil.).....	Lexington
Barbour, Dr. Philip F.....	Louisville
Belknap, Mrs. Morris B.....	R. R. No. 1, Box 57 G., Louisville
Fulton, Dr. Gavin.....	600 Atherton Bldg., Louisville
Haggin, Mrs. Louis Lee.....	Elmendorf Farm, Lexington
Kentucky State Association of Graduate Nurses (Affil.).....	121 W. Chestnut St., Louisville
Morton, Mrs. David.....	Glenview, Jefferson Co., Louisville
Myer, Dr. Samuel Percival.....	216 W. Chestnut St., Louisville
Shaver, Miss Elizabeth, Supervisor, Babies' Milk Fund Association of Louisville.....	215 E. Walnut St., Louisville
Smith, Mrs. Letchworth.....	R. F. D. No. 1, Louisville
Tuley, Dr. Henry Enos.....	111 W. Kentucky St., Louisville

Louisiana

Butterworth, Dr. W. W.....	Tulane University, New Orleans
Child Welfare Association of New Orleans (Affil.).....	204 Wels Bldg., New Orleans
Denegre, Mrs. George.....	Prytania and Eighth Sts., New Orleans
Hart, Mr. W. O.....	134 Carondelet St., New Orleans
Newman, Dr. J. W.....	3512 St. Charles Ave., New Orleans

Maine

Erb, Mrs. F. O.....	110 Emery St., Portland
Everett, Dr. Harold J.....	727 Congress St., Portland
Johnson, Miss Clarissa Ordway, Public Health Nurse	Foxcroft
Leighton, Dr. Adam P., Jr.....	109 Emery St., Portland
Moore, Dr. Roland B.....	768 Congress St., Portland
Upson, Mr. Wm. J.....	Bethel
Webster, Dr. F. P.....	Portland
Young, Dr. A. G., Secretary, State Board of Health	Angusta

Maryland

Abel, Mrs. John J.....	Charles St. Ext., Baltimore
Abercrombie, Dr. Ronald T.....	Homewood Apts., Baltimore
Athey, Mrs. C. N.....	100 S. Patterson Park Ave., Baltimore
Baby Welfare Section of Civic Club of Cumberland (Affil.).....	Cumberland
Barker, Mrs. L. F.....	1035 N. Calvert St., Baltimore
Belt, Mrs. W. H. G.....	613 Reservoir St., Baltimore
Bliss, Mrs. Wm. J. A.....	1017 St. Paul St., Baltimore
Bloodgood, Mrs. Joseph C.....	904 N. Charles St., Baltimore
Bonaparte, Mr. Charles J.....	216 St. Paul St., Baltimore
Bowdoin, Miss Alice G.....	865 Park Ave., Baltimore
Bowdoin, Mrs. W. G.....	1106 N. Charles St., Baltimore
Buck, Mrs. R. B.....	1228 St. Paul St., Baltimore
Carey, Mrs. Francis King.....	509 Cathedral St., Baltimore
Carman, Dr. R. P.....	1701 N. Caroline St., Baltimore
Cary, Mr. Richard L., Ass't Director, Bureau of State and Municipal Research.....	728 Equitable Bldg., Baltimore
Cone, Dr. Claribel.....	The Marlborough, Baltimore
Cook, Mrs. George Hamilton.....	1001 St. Paul St., Baltimore
Corkran, Mrs. Benj. W.....	200 Goodwood Gardens, Roland Park
Council Milk and Ice Fund (Affil.).....	Baltimore
Davis, Mrs. John Staige.....	1200 Cathedral St., Baltimore
Dobbin, Mrs. Thomas M.....	1308 Bolton St., Baltimore
Dorsey, Mrs. John R.....	1107 St. Paul St., Baltimore
Ellicott, Mrs. Charles.....	Melvale
Epstein, Mr. Jacob.....	2532 Eutaw Place, Baltimore
Etchberger, Miss M. Frances, Supt., Babies' Milk Fund Assn.....	2 E. Lexington St., Baltimore
Follis, Dr. Richard H.....	3 E. Read St., Baltimore
France, Mrs. F. C.....	219 W. Lanvale St., Baltimore
French, Miss Anna M.....	219 1/2 E. North Ave., Baltimore
Friedenwald, Dr. Julius.....	1013 N. Charles St., Baltimore
Fulton, Dr. John S., Secretary, State Department of Health.....	Baltimore
Garrett, Mr. Robert.....	Garrett Bldg., Baltimore
Gibbs, Mr. John S., Jr.....	1026 N. Calvert St., Baltimore
Gibbs, Mrs. Rufus M.....	1209 St. Paul St., Baltimore
Gorter, Dr. Nathan R.....	1 W. Biddle St., Baltimore
Greenbaum, Dr. Harry S.....	1614 Eutaw Place, Baltimore
Guggenheimer, Miss Aimee.....	36 Talbot Road, Windsor Hills, Baltimore
Hamburger, Mrs. Louis P.....	1207 Eutaw Place, Baltimore
Health Department (Affil.).....	City Hall Annex, Baltimore
Hecht, Mrs. Albert.....	2408 Eutaw Place, Baltimore
Heinemann, Mrs. Milton.....	2220 Eutaw Place, Baltimore
Hendley, Mrs. Charles W.....	Greenway, W. of Charlotte Rd., Guilford
Hochschild, Mrs. Max.....	1922 Eutaw Place, Baltimore
Hooker, Dr. Donald R.....	Station H., Govans, Baltimore
Hooper, Mrs. Jas. E.....	St. Paul and 23rd Sts., Baltimore
Howland, Dr. John.....	Johns Hopkins Hospital, Baltimore
Hunner, Dr. Guy L.....	2305 St. Paul St., Baltimore
Hutzler, Mrs. Albert D.....	Carroll and Delaware Roads, Baltimore
Jacobs, Dr. Henry Barton.....	11 W. Mt. Vernon Place, Baltimore
Jencks, Mrs. Francis M.....	1 W. Mt. Vernon Place, Baltimore
Katz, Mrs. A. Ray.....	2523 Eutaw Place, Baltimore
Keyser, Mr. R. Brent.....	912 Keyser Bldg., Baltimore
Knipp, Master George W.....	Station D, Baltimore
Knipp, Miss Gertrude B.....	1821 Park Ave., Baltimore
Knipp, Dr. Harry E.....	Fremont and Lanvale Sts., Baltimore

Knox, Dr. and Mrs. J. H. Mason, Jr.	Wendover Road, Guilford
Knox, Miss Katherine Bowdoin	Wendover Road, Guilford
Knox, Master J. H. Mason, III	Wendover Road, Guilford
Lauer, Mrs. Leon	Esplanade Apts., Baltimore
Lent, Miss Mary E., Supt., I. V. N. Society	1123 Madison Ave., Baltimore
Levering, Mr. Joshua	1316 Eutaw Place, Baltimore
Lockwood, Dr. Wm. F.	8 E. Eager St., Baltimore
MacMahon, Miss Amy E., R. N.	Johns Hopkins Hospital, Baltimore
McLanahan, Mr. Austin	Alex. Brown & Sons, Baltimore
Marburg, Mrs. Theodore	14 W. Mt. Vernon Place, Baltimore
Maryland Assn. for Study and Prevention of Infant Mortality (Affil.)	2 E. Lexington St., Baltimore
Maryland Society for the Prevention of Blindness (Affil.)	Baltimore
Mitchell, Dr. Charles W.	9 E. Chase St., Baltimore
Murray, Mrs. Edward	Elkridge
Oliver, Mr. Wm. B.	The Washington Apts, Baltimore
Paine, Mrs. Clinton Paxton	The Washington Apts, Baltimore
Pleasants, Dr. J. Hall	806 University Parkway, Baltimore
Poultney, Mrs. Wm. D.	Chattolance
Ramsay, Mr. John B.	1218 St. Paul St., Baltimore
Ruhrak, Dr. John	Algonquin Apts., Baltimore
Seegar, Dr. and Mrs. J. K. B. E.	1529 Park Ave., Baltimore
Semmes, Mrs. John E.	10 E. Eager St., Baltimore
Sherwood, Dr. Mary	Arundel Apts., Baltimore
Shoemaker, Mrs. Edward	1031 N. Calvert St., Baltimore
Shoemaker, Mr. S. M.	Eccleston
Sonneborn, Mrs. Selgmuud B.	2420 Eutaw Place, Baltimore
Taylor, Mrs. A. H.	4 E. Eager St., Baltimore
Walker, Mrs. Amelia H.	25 W. Chase St., Baltimore
Weich, Dr. Wm. H.	807 St. Paul St., Baltimore
Welsh, Dr. Lillian	Arundel Apts., Baltimore
Westheimer, Mrs. Henry	2322 Eutaw Place, Baltimore
White, Mr. Richard J.	10 South St., Baltimore
Whitridge, Mrs. John	Brooklandville P. O.
Whitridge, Mrs. Morris	Greenway and Charlcote Place, Guilford
Wight, Mrs. John H.	Garrison P. O.
Williams, Dr. J. Whitridge	1128 Cathedral St., Baltimore
Young, Dr. Hugh H.	330 N. Charles St., Baltimore

Massachusetts

Adriance, Dr. Vanderpool	Williamstown
Almy, Dr. Thomas	140 Rock St., Fall River
Arnold, Miss Sarah Louis, Dean, Simmons College	Boston
Avon Home (Affil.)	689 Massachusetts Ave., Cambridge
Baby Feeding Association (Affil.)	613 Main St., Springfield
Bailey, Dr. Wm. F.	Homeopathic Hospital, Boston
Beard, Miss Mary, Director, Instructive District Nursing Assn.	561 Massachusetts Ave., Boston
Binney, Mr. Henry P., Jr.	303 Marlborough St., Boston
Blood, Miss Alice F.	10 Humboldt St., Boston
Borden, Mr. Richard P.	57 N. Main St., Fall River
Boston Children's Aid Society (Affil.)	43 Hawkins St., Boston
Boston Children's Friend Society (Affil.)	48 Rutland St., Boston
Boston Floating Hospital (Affil.)	54 Devonshire St., Boston
Bowditch, Dr. Henry I.	416 Marlborough St., Boston
Brackett, Mr. Jeffrey R.	41 Marlboro St., Boston
Brayton, Miss Alice	294 Prospect St., Fall River
Broughton, Dr. Arthur N.	10 Roanoke Ave., Jamaica Plain
Bryant, Mrs. John	338 Marlboro St., Boston
Cabot, Dr. Hugh	87 Marlboro St., Boston
Campbell, Mr. Francis A.	Pemberton Square, Boston
Carr, Mr. Peter H.	Taunton
Carstens, Mr. C. C., Secretary, Mass. Society for the Prevention of Cruelty to Children	43 Mt. Vernon St., Boston
Church, Miss Myra H.	31 Jackson St., Lawrence
Clark, Mrs. J. D.	Sherborn
Claxton, Mr. Thomas J.	285 Congress St., Boston
Codman, Mrs. E. A.	227 Beacon St., Boston
Cody, Dr. Edmond F.	105 S. Sixth St., New Bedford

Committee on Prenatal and Obstetrical Care of the Women's Municipal League of Boston (Affil.)		49 Beacon St., Boston
Cook, Miss M. J., R. N., The Melrose Hospital Assn.	Melrose	
Crawford, Dr. F. X.	Quarantine Station, Deer Island, Bos- ton	
Cronan, Mr. John F.	11 Pemberton Square, Boston	
Curry, Dr. Edmund F.	299 Hanover St., Boston	
Cutler, Mr. Elliott C.	Brookline	
Dana, Miss Charlotte W., R. N., Supt., Boston Lying-In Hospital.	24 McClean St., Boston	
Davis, Mr. Michael M., Jr.	Boston Dispensary, 25 Bennett St., Bos- ton	
Davis, Dr. Nelson C.	494 Rutherford Ave., Charlestown, Bos- ton	
Davis, Dr. Wm. H.	25 Beaumont St., Dorchester	
DeNormandie, Dr. Robert L.	357 Marlborough St., Boston	
Dennison, Mr. Joseph A.	18 Tremont St., Boston	
Denny, Dr. Francis P.	111 High St., Brookline	
Downsley, Dr. John F.	12 Huntington Ave., Boston	
Dunn, Dr. Charles Hunter	220 Marlboro St., Boston	
Durant, Mrs. Clark T., President, Visiting Nurse Assn.	Great Barrington	
Eastman, Dr. A. C.	6 Chestnut St., Springfield	
Eddy, Miss Eugella L., Supt., District Nursing Assn.	374 Anawan St., Fall River	
Egan, Miss Sarah A.	54 Devonshire St., Boston	
Emerson, Dr. Wm. R. P.	657 Boylston St., Boston	
Emmons, Dr. Arthur B., 2nd.	86 Bay State Road, Boston	
Eustis, Mrs. F. A.	Canton Ave., Readville	
Eustis, Mr. Richard S.	329 Beacon St., Boston	
Farrington, Miss Ellenor.	56 Bellevue St., West Roxbury	
Fenton, Mr. Henry M.	27 Kilby St., Boston	
Flanagan, Mrs. Jos. H.	Walnut Park, Newton	
Forbes, Miss Ellen.	Milton	
Foster, Mr. Warren Dunham.	The Youth's Companion, Boston	
Frank, Mrs. Bertha B.	65 Maples Road, Brookline	
Friedman, Dr. Leo Victor.	425 Marlborough St., Boston	
Gallivan, Dr. Wm. J.	743 Biney Square, Boston	
Green, Mr. Henry Copley.	3 Park St., Boston	
Heffernan, Miss Ellen A.	City Hall Annex, Boston	
Hill, Mrs. Edward Burlingame.	8 Highland St., Cambridge	
Hitchcock, Dr. John S., State District Health Officer, State Department of Health.	Northampton	
Holmes, Dr. May S.	Belmont Hospital, Worcester	
Howell, Dr. Wm. W.	279 Clarendon St., Boston	
Hughes, Dr. Laura A. C.	98 Huntington Ave., Boston	
Huntington, Dr. James Lincoln.	8 Gloucester St., Boston	
Infant Hygiene Assn. of Holyoke (Affil.)	Holyoke	
Instructive District Nursing Assn. (Affil.)	561 Massachusetts Ave., Boston	
Irving, Dr. Fred C.	96 Bay State Road, Boston	
Jackson, Dr. Delbert L.	362 Commonwealth Ave., Boston	
Keith, Mr. A. Paul.	Keith's Theatre, Boston	
Lally, Miss Theresa M.	43 Tremont St., Boston	
Lancaster, Dr. Walter B.	522 Commonwealth Ave., Boston	
Lane, Mrs. J. C.	296 Walpole St., Norwood	
Learned, Dr. Wm. T.	Fall River	
Leary, Dr. Timothy.	44 Burroughs St., Jamaica Plain, Bos- ton	
Lee, Mr. Joseph.	101 Tremont St., Boston	
Little, Dr. Abby N.	22 Essex St., Newburyport	
Logan, Mr. Theodore M.	560 E. Broadway, So. Boston	
McCahey, Dr. Charles H.	Summer St., Somerville	
MacCarthy, Dr. Francis H.	19 Joy St., Boston	
McIntyre, Dr. George H.	5 Dana St., Cambridge	
Marvell, Dr. Mary W.	242 Highland Ave., Fall River	
Mason, Mrs. Charles E.	Readville	
Mason, Mr. Charles E.	30 State St., Boston	
Massachusetts Branch Congress of Mothers and Parent Teachers' Assn. (Affil.)	Andover	
Massachusetts Milk Consumers' Assn. (Affil.)	49 Beacon St., Boston	
Maverick Dispensary (Affil.)	18 Chelsea St., East Boston	
Milk and Baby Hygiene Assn. (Affil.)	296 Boylston St., Boston	
Morgan, Dr. Charles E.	Central St., Somerville	

Morse, Dr. John Lovett.....	70 Bay State Road, Boston
Murphy, Miss Alice, R. N., Chief Nurse, District Nursing Assn.....	43 Part St., Stoughton
Newell, Dr. Franklin S.....	443 Beacon St., Boston
Page, Dr. Calvin Gates.....	123 Marlboro St., Boston
Paine, Dr. A. K.....	366 Commonwealth Ave., Boston
Palmer, Dr. Ezra.....	Trinity Court, Boston
Putnam, Mrs. Wm. Lowell.....	49 Beacon St., Boston
Ratigan, Mr. Thomas H.....	65 Kilby St., Boston
Reardon, Mr. John A., Jr.....	52 Church St., Boston
Richardson, Miss Margaret H., R. N.....	28 Appleton St., Boston
Riggs, Dr. Austen Fox.....	Stockbridge
Rogers, Mr. Frank S.....	192 Upland Road, Cambridge
Rosenau, Dr. Milton J.....	Harvard Medical School, Boston
Ryan, Mr. Joseph A.....	90 Chauncey St., Boston
Sanford, Miss Kate I.....	Taunton
Shackford, Miss Martha H.....	Wellesley College, Wellesley
Shaw, Mrs. R. G., 2nd.....	Newton Centre
Sherwood, Miss Margaret P.....	Wellesley College, Wellesley
Shuman, Mr. A.....	Shuman's Corner, Boston
Smith, Dr. Richard M.....	329 Beacon St., Boston
Society for Helping Destitute Mothers and Infants (Affil.).....	279 Tremont St., Boston
Stewart, Miss Martha J.....	Coburn Home, Ipswich
Strong, Miss Mary L.....	South End House, 19 Pembroke St., Boston
Sweeney, Mr. George W.....	221 Columbus Ave., Boston
Swift, Dr. John B.....	419 Beacon St., Boston
Talbot, Dr. Fritz B.....	311 Beacon St., Boston
Tilton, Mrs. Henry O.....	6 Chalmers Road, Worcester
Tinkham, Mr. George H.....	11 Pemberton Square, Boston
Titus, Dr. Raymond S.....	31 Massachusetts Ave., Boston
Trask, Miss Carrie Miller.....	48 South Central Ave., Wollaston
Unity Lend-a-Hand Society (Affil.).....	Lexington
Walker, Mr. George H.....	1108 Boylston St., Boston
Warner, Mr. Joseph B.....	84 State St., Boston
Whipple, Dr. F. H.....	1079 Boylston St., Boston
Wright, Mr. Joseph B.....	291 Atlantic Ave., Boston
Young, Dr. J. Herbert.....	19 Baldwin St., Newton
Young-Slaughter, Dr. Emma E.....	545 School St., Lowell

Michigan

Alumnae Association of the Battle Creek Sanitarium and Hospital Training School for Nurses (Affil.).....	Battle Creek
Babies' Milk Fund of Detroit (Affil.).....	924 Brush St., Detroit
Barbour, Mrs. W. T.....	R. R. No. 3, Birmingham
Bedinger, Mr. George R., General Secretary, Children's Aid Society.....	33 Warren Ave., W., Detroit
Butzel, Mr. Fred.....	1012 Union Trust Bldg., Detroit
Children's Free Hospital Assn. (Affil.).....	Antoine and Farnsworth Sts., Detroit
Cowie, Dr. D. Murray.....	University of Michigan, Ann Arbor
Duffield, Dr. Francis.....	248 Seminole Ave., Detroit
Farrand Training School Alumnae Assn. (Affil.).....	Detroit
Ford, Miss Stella D.....	1130 Woodward Ave., Detroit
Freund, Mrs. Hugo A.....	56 Virginia Park, Detroit
Halsey, Miss Sarah L.....	441 Kirby Ave., West, Detroit
Holmes, Dr. Arthur R.....	270 Woodward Ave., Detroit
Hoobler, Dr. B. Raymond.....	1563 David Whitney Bldg., Detroit
Hosmer, Miss Margaret B.....	51 Eliot St., Detroit
Infant Feeding Clinic of the D. A. Blodgett Home (Affil.).....	Grand Rapids
Jennings, Dr. Charles G.....	435 Jefferson Ave., Detroit
Johansen, Miss I. C., Visiting Nurse.....	Grosse Pointe Farms
Johnston, Dr. Collins H.....	526 Metz Bldg., Grand Rapids
Kellogg, Dr. J. H., Supt. Battle Creek Sanitarium.....	Battle Creek
King, Mrs. Francis.....	Orchard House, Alma
La Forge, Miss Zoe, Supt., Babies' Milk Fund of Detroit.....	924 Brush St., Detroit
McGregor, Mrs. Tracy.....	239 Brush St., Detroit
Michigan Sanitarium and Benevolent Assn. (Affil.).....	Battle Creek
Michigan State Nurses' Assn. (Affil.).....	Petoskey
Nichols, Mrs. J. Brooks.....	Detroit

Osorne, Miss Mary E., Board of Health Nurse	703 East 2nd St., Flint
Parker, Mrs. Walter R.	285 Seminole Ave., Detroit
Peterson, Dr. Reuben	University Hospital, Ann Arbor
Pope, Mrs. G. D.	212 Iroquois Ave., Detroit
Pope, Mrs. Willard	37 Putnam Ave., Detroit
Race Betterment Conference (Affil.)	Battle Creek
Rosenberger, Mrs. Oscar	134 Lathrop Ave., Detroit
Ross, Dr. Worth	Kresge Medical Bldg., Detroit
Bowland, Dr. R. S.	512 Washington Arcade, Detroit
Smith, Dr. Richard R.	Metz Bldg., Grand Rapids
Smith, Mr. Frank J.	1st and Old Detroit Nat. Bank, Detroit
Stevens, Mr. Henry Glover	615 Stevens Bldg., Detroit
Visiting Nurse Assn. (Affil.)	324 Brush St., Detroit

Minnesota

Adair, Dr. Fred L.	Donaldson Bldg., Minneapolis
Bracken, Dr. H. M., Secretary, State Board of Health	Capitol Bldg., St. Paul
Burnet, Mrs. R. W.	2601 Euclid Place, Minneapolis
Chesley, Dr. A. J., Director, Division of Preventable Diseases, State Board of Health	Minneapolis
Christison, Dr. J. T.	535 Lowry Bldg., St. Paul
Crosby, Miss Caroline M.	2105 1st Ave., S., Minneapolis
Doerr, Mrs. George V.	2611 Euclid Ave., Minneapolis
Helm, Mrs. Belle G.	1819 Girard Ave., Minneapolis
Hirschfelder, Dr. Arthur D.	2113 Olive Ave., So., Minneapolis
Huenekens, Dr. E. J.	1037 Andrus Bldg., Minneapolis
Infant Welfare Department, Duluth Consistory	
Scottish Rite Masons (Affil.)	Masonic Temple, Duluth
Infant Welfare Society of Minneapolis (Affil.)	323 Plymouth Bldg., Minneapolis
Ireys, Mrs. Charles G.	401 Groveland Ave., Minneapolis
McCarthy, Mrs. J., Jr.	2307 Pleasant Ave., Minneapolis
McIntyre, Miss Mildred E.	St. Peter
Minnesota Public Health Assn. (Affil.)	Old Capitol, St. Paul
Ramsey, Dr. Walter R.	Lowry Annex, St. Paul
Ross, Mrs. Charles F.	4741 Fremont Ave., S., Minneapolis
Rowe, Dr. Olin W.	Fidelity Bldg., Duluth
St. Paul Baby Welfare Assn. (Affil.)	Wildor Bldg., St. Paul
Schlutz, Dr. Frederick W.	320 Donaldson Bldg., Minneapolis
Sedgwick, Dr. J. P.	New Syndicate Bldg., Minneapolis
Shevlin, Mrs. Thomas L.	2205 Park Ave., Minneapolis
Sommers, Mrs. H. S.	356 Portland Ave., St. Paul
Ueland, Mrs. Andreas	Calhoun Blvd. and Richfield Ave., Minneapolis
Walker, Mrs. Archie Dean	419 Groveland Ave., Minneapolis
Williams, Mrs. Charles R.	2215 Pillsbury Ave., Minneapolis

Mississippi

Foster, Dr. R. Heath	Citizens National Bank Bldg., Meridian
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Missouri

Bleyer, Dr. A. S.	516 Delmar Bldg., St. Louis
Brady, Dr. Jules M.	1567 Union Ave., St. Louis
Fouke, Mrs. Philip B.	4944 Lindell Blvd., St. Louis
Greene, Mrs. Charles W.	814 Virginia Ave., Columbia
Halbert, Mr. L. A.	Water Works Bldg., Kansas City
Kapprel, Miss Mary C., Supervising Nurse, Baby Welfare Assn.	2307 South 6th St., St. Joseph
Lippmann, Dr. Gustave	4668 Berlin Ave., St. Louis
McClure, Miss Margaret, Supt., Visiting Nurse Assn.	Vanol Bldg., St. Louis
Missouri State Nurses' Assn. (Affil.)	6251 Etzel Ave., St. Louis
Moore, Miss Elizabeth	3125 Lafayette Ave., St. Louis
Nagel, Mrs. Charles	44 Westmoreland Place, St. Louis
Neff, Dr. Frank C.	900 Rialto Bldg., Kansas City
Paguin, Dr. Paul, Director, Hospital and Health Board, Health Department	Kansas City
Ravenel, Dr. Mazyck P.	University of Missouri, Columbia
St. Joseph Baby Welfare Assn. (Affil.)	2307 South 6th St., St. Joseph
St. Louis Children's Hospital (Affil.)	St. Louis

Saunders, Dr. Edward W.....	1541 S. Grand Ave., St. Louis
Tuttle, Dr. George M.....	4817 Maryland Ave., St. Louis
Veeder, Dr. Borden S.....	500 S. Kingshighway, St. Louis
Volker, Mr. Wm.....	308 West 8th St., Kansas City
Wilhelm, Dr. F. E.....	1208 Wyandotte St., Kansas City
Zahorsky, Dr. John.....	1460 S. Grand Ave., St. Louis

Montana

Dean, Dr. Maria M.....	P. O. Box 544, Helena
Hughes, Miss Margaret M., R. N.....	P. O. Box 928, Helena
Montana State Assn. of Nurses' (Affil.).....	920 2nd Ave., North, Great Falls

Nebraska

Christie, Dr. B. W.....	330 Bee Bldg., Omaha
McClanahan, Dr. H. M.....	463 Brandeis Bldg., Omaha

Nevada

McKinley, Dr. F. J., Supt., Walker River Agency, U. S. Indian Service.....	Schurz
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New Hampshire

Atkins, Mr. Kenneth N.....	Dartmouth Medical School, Hanover
Bennett, Dr. H. W. N.....	Manchester
Berlin Mills Company's District Nurse (Affil.).....	Berlin
Clow, Dr. Fred Ellsworth.....	Wolfeboro
Infant Aid Assn. (Affil.).....	Beacon Bldg., Manchester
Streeter, Mrs. Frank S.....	234 N. Main St., Concord
Woods, Prof. Erville B., Secretary, Children's Commission	Dartmouth College, Hanover

New Jersey

Alexander, Mrs. A.....	Castle Point, Hoboken
Babies' Hospital (Affil.).....	437 High St., Newark
Babies' Hospital Milk Dispensary (Affil.).....	437 High St., Newark
Banks, Dr. Charles W.....	298 Main St., East Orange
Benedict, Dr. Alfred C.....	129 S. Orange Ave., South Orange
Board of Health (Affil.).....	Municipal Bldg., Montclair
Bumsted, Dr. C. V. R.....	235 Grafton Ave., Newark
Cammann, Mrs. Oswald N.....	40 North Ave., Elizabeth
Coe, Miss Lillian F., Visiting Nurse.....	Bernardsville
Coit, Dr. Henry L.....	277 Mt. Prospect Ave., Newark
Crum, Mr. Frederick S.....	Prudential Insurance Co., Newark
Cunningham, Mrs. J. W.....	Box 252, West End
Day, Dr. Grafton E.....	Haddon and Lincoln Aves., Collings- wood
Dennis Dr. L.....	49 Ridge St., Orange
Diet Kitchen of the Oranges (Affil.).....	124 Essex Ave., Orange
Folsom, Miss Eleanor.....	Llewellyn Park, Orange
Free Public Library (Affil.).....	East Orange
Hall, Dr. John, Health Officer, Board of Health.....	441 N. Main St., East Orange
Harvey, Dr. Thomas W., Jr.....	463 Main St., Orange
Hoffman, Mr. Frederick I.....	Prudential Insurance Co. of America, Newark
Hogan, Mr. Edward P.....	7 Second St., Weehawken
Howell, Mrs. J. W.....	211 Ballantine Parkway, Newark
Levy, Dr. Julius, Director, Division of Child Hygiene, Department of Health.....	Newark
Marvel, Dr. Philip.....	1616 Pacific Ave., Atlantic City
Miller, Dr. D. J. Milton.....	127 S. Illinois Ave., Atlantic City
Moore, Mrs. Paul.....	Hollow Hill Farm, Convent
New Jersey Congress of Mothers (Affil.).....	Haddonfield
Nicholson, Mrs. Wm. H., Jr.....	327 South 2nd St., Millville
O'Gorman, Dr. M. W., Chief, Division of Child Hygiene, Department of Health.....	Jersey City
Pineo, Dr. Frank W.....	199 Garside St., Newark
Richards, Dr. L. J., Health Officer.....	Elizabeth

Roebbing, Mrs. Karl L.	211 West State St., Trenton
St. Vincent's Nursery and Babies' Hospital	Montclair
(Afil.)	
Stevens, Mr. Richard	Hoboken
Synnot, Dr. Martin J.	34 S. Fullerton Ave., Montclair
Tough, Miss Mary	41 S. Willow St., Montclair
Van Winkle, Mrs. Abram	35 Lincoln Park, Newark
Visiting Nurse Assn. (Afil.)	122 Magnolia Ave., Elizabeth
Wick, Miss Jennie G., Visiting Nurse	Preston Apts., Atlantic City

New York

American Nurses' Assn. (Afil.)	419 West 144th St., New York City
Amerman, Miss Bessie Ely, Supt. of Nurses, Henry Street Settlement	265 Henry St., New York City
Babies' Dairy Assn. (Afil.)	8 West 49th St., New York City
Babies' Hospital (Afil.)	657 Lexington Ave., New York City
Babies' Milk Dispensary of Buffalo (Afil.)	181 Franklin St., Buffalo
Babies' Welfare Assn. (Afil.)	Centre and Walker Sts., New York City
Bartow, Mrs. Bernard	503 Delaware Ave., Buffalo
Baby Welfare Committee of Utica (Afil.)	Utica
Baker, Miss Charlotte S.	26 West 55th St., New York City
Baker, Dr. S. Josephine, Director, Bureau of Child Hygiene, Department of Health	New York City
Benson, Dr. Reuel A.	8 West 49th St., New York City
Biggs, Dr. Herman M., State Commissioner of Health	Albany
Bookstaver, Mr. William	Dunkirk
Brewster, Mr. George S.	61 Wall St., New York City
Brooklyn Children's Aid Society (Afil.)	72 Schermerhorn St., Brooklyn
Brooklyn Pediatric Society (Afil.)	Brooklyn
Brown, Mr. Robert H.	Engineering Bldg., Columbia University, New York City
Brown, Dr. W. M.	272 Alexander St., Rochester
Bureau of Health (Afil.)	Rochester
Bureau of Educational Nursing, New York Assn. for Improving the Condition of the Poor (Afil.)	105 East 22nd St., New York City
Bureau of Municipal Research (Afil.)	261 Broadway, New York City
Button, Dr. Lucius L.	265 Alexander St., New York City
Calvert, Mrs. John B.	201 West 57th St., New York City
Camp Fire Girls (Afil.)	461 Fourth Ave., New York City
Candfield, Mrs. George Folger	344 West 72nd St., New York City
Child Welfare Assn. of Binghamton (Afil.)	107 Collier St., Binghamton
Children's Welfare Division of Bellevue Hospital Social Service Department (Afil.)	New York City
Clark, Miss Mary Vida	105 East 22nd St., New York City
Clarke, Dr. T. Wood	240 Genesee St., Utica
Courtney, Rt. Rev. Frederick	31 East 71st St., New York City
Crich, Miss Mary V., R. N.	415 Smith St., Peekskill
Cutting, Miss Elizabeth	Tuxedo Park
Darlington, Dr. Thomas	27 Washington Square, New York City
Darrach, Dr. Wm.	47 West 50th St., New York City
De La Motte, Dr. Anna C.	70 South Tenth St., Brooklyn
Dennett, Dr. Roger H.	120 East 38th St., New York City
Department of Social Welfare, New York Assn. for Improving the Condition of the Poor (Afil.)	105 East 22nd St., New York City
Diefenthaler, Mrs. Charles R.	303 West 91st St., New York City
District Nursing Committee Brooklyn Bureau of Charities (Afil.)	78 Schermerhorn St., Brooklyn
Draper, Miss Martha L.	125 East 38th St., New York City
Dunham, Mrs. Edward K.	35 East 68th St., New York City
Emerson, Dr. Haven, Commissioner of Health	120 East 62nd St., New York City
Fennessy, Miss Mary V., Supt. of Nurses, Dis- trict Nursing Committee, Brooklyn Bureau of Charities	80 Schermerhorn St., Brooklyn
Flagler, Mrs. Harry H.	32 Park Ave., New York City
Folks, Mr. Homer	105 East 22nd St., New York City
Fox, Mr. Hugh F.	New York City
Frankel, Dr. Lee K.	1 Madison Ave., New York City
Freeman, Dr. Rowland G.	211 West 57th St., New York City
Froneczak, Dr. Francis E., Health Commissioner	Municipal Bldg., Buffalo
Gillett, Mrs. Wm. K.	Peiham Manor

Goodrich, Miss Annie W.....	Teachers' College, Columbia University, New York City
Hammond, Mrs. John Hays.....	903 Park Ave., New York City
Hart, Dr. Hastings H., Director, Department of Child-Helping, Russell Sage Foundation.....	130 East 22nd St., New York City
Haynes, Dr. Royal Storrs.....	213 West 70th St., New York City
Hazard, Mrs. Frederick R.....	Syracuse
Hebrew Infant Asylum (Afil.).....	Kingsbridge Road, New York City
Helman, Dr. Henry.....	64 West 85th St., New York City
Henry Street Settlement (Afil.).....	265 Henry St., New York City
Herrman, Dr. Charles.....	250 West 88th St., New York City
Hess, Dr. Alfred F.....	16 West 86th St., New York City
Higgins, Mr. Charles M.....	101 9th Ave., Brooklyn
Hill, Mr. Nicholas S., Jr.....	100 William St., New York City
Hilton, Mrs. George P.....	240 State St., Albany
Hitch, Mrs. Frederic Delano.....	Newburgh
Holden, Mrs. Edwin B.....	323 Riverside Drive, New York City
Holmes, Miss Katherine W.....	161 West 61st St., New York City
Homer, Madame Louise.....	48 East 78th St., New York City
Holt, Dr. L. Emmett.....	14 West 55th St., New York City
Hoopes, Mr. Maurice.....	Glens Falls
Howe, Miss Fanny R., R. N.....	438 West 116th St., New York City
Hoyt, Mrs. G. L.....	20 Washington Square, New York City
Infant Welfare Committee (Afil.).....	508 East Genesee St., Syracuse
Jacobi, Dr. Abraham.....	19 East 47th St., New York City
"A. Jacobi Hospital for Children" (Afil.).....	Lexington Ave. and 76th St., New York City
Johnson, Miss Helen Louise.....	234 Paddock St., Watertown
Johnson, Mrs. Burges.....	25 Dwight St., Poughkeepsie
Kellogg, Mrs. F. Leonard.....	118 East 70th St., New York City
Kellogg, Mrs. Morris W.....	22 East 63rd St., New York City
Kerley, Dr. Charles G.....	132 West 81st St., New York City
Kerr, Miss Anna W., Division of Child Hygiene, Department of Health, Sanitary Bureau.....	New York City
Kohler, Mrs. Emil.....	258 West 91st St., New York City
Kosmak, Dr. George.....	23 East 93rd St., New York City
La Fetra, Dr. L. E.....	113 East 61st St., New York City
Le Lacheur, Miss Bessie L.....	509 West 121st St., New York City
Leo-Wolf, Dr. Carl G.....	481 Franklin St., New York City
Little, Dr. George F.....	469 Clinton Ave., Brooklyn
Macy, Dr. Mary Sutton.....	101 West 80th St., New York City
Macy, Mrs. V. Everitt.....	Chilmark, Scarborough-on-Hudson
Main, Mr. William.....	100 Broadway, New York City
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INDEX

- Affiliated Societies, Reports of, 365
 Allen, F. H., M. D., Report, 396
 Alsberg, Carl L., M. D. To What Extent May the Mother Substitute Proprietary Preparations for the Advice of a Physician? 197
 Amerman, Bessie E., Discussion, 345
 Anti-Tuberculosis Assn., Milwaukee, 442
 Are Babies Worth Saving? Infant Welfare Work: Its Purposes, Opportunities and Agencies, Homer Folks, LL. D., 31
 Armstrong Donald B., Report, 416
 Arnold, Mary, Report, 408
 Ash, Mrs. Isadore, Report, 385
 Assn. for Improving Condition of the Poor, New York, 414
 Associated Charities, Fargo, N. D., 420
 Associated Charities of Greater Johnstown, Pa., 434

 Babbitt, Ellen C., Discussion, 274
 Babies' Dispensary and Hospital, Cleveland, 424
 Babies' Dispensary Guild, Hamilton, Ontario, 368
 Babies' Hospital—
 Boston, 386
 Philadelphia, 427
 St. Vincent's Nursery and. Montclair, N. J., 403
 Babies' Milk Fund Assn.,
 Louisville, Ky., 381
 Baltimore, 383
 Babies' Welfare Assn.,
 New York City, 407
 Philadelphia, 428
 Baby Feeding Assn., Springfield, Mass., 396
 Baby Milk Supply Assn., Lexington, Ky., 380
 Baby Welfare Committee, Providence, R. I., 438
 Baby Welfare Section, Civic Club, Cumberland, Md., 385
 Bain, Beulah A., Report, 403
 Baker, S. Josephine, M. D.,
 The Possible Reduction of Mortality Among Sub-Normal Institutional Babies, 244
 Discussion, 127, 277, 278, 337
 Baldy, J. M., M. D.,
 Is the Midwife A Necessity? 105
 Discussion, 137
 Ballard, Nancy, Report, 381
 Baltimore. Babies' Milk Fund Assn., 383
 Council Milk and Ice Fund, 385
 Beard, Mary, Discussion, 339
 Report, 387
 Bedinger, George R., Report, 390
 The Wet Nurse Directory of Boston, 252
 Benz, H. J., M. D., Discussion, 129
 Bibliography:
 Eugenics, 234, 239
 Fresh Air Treatment of Respiratory Diseases, 75
 Institutional Care, 265
 Maternity Insurance, 195
 Midwife, Education, Licensing and Supervision of, 91, 92, 94, 96
 Prenatal Care, 228
 Binghamton. Child Welfare Assn., 405
 Birth Registration, 40, 41, 203
 New York: Physicians, Midwives, 93
 Wilbur, Cressy L., M. D., 79, 203
 Blankenburg, Rudolph, Address, 27
 Blindness, Prevention of, 144
 See Reports Affiliated Societies, under
 XIV., 408
 Boarding-Out Care of Infants. *See Session on Homeless Babies.*
 Borden, Richard P., Cooperation for Public Health, 295
 Discussion, 346
 Boston:
 Babies' Hospital, 386
 Instructive District Nursing Assn., 386
 Massachusetts Milk Consumers' Assn., 387
 Milk and Baby Hygiene Assn., 388
 Prenatal and Obstetrical Committee, Women's Municipal League, 391
 Society for Helping Destitute Mothers and Infants, 392
 Brown, Adelaide, M. D., Report, Obstetrics, 145
 Brown, Alan, M. D., Discussion, 341

 Care of Homeless Babies, Session on, 243
 Chicago Infant Welfare Society, 377
 Child Federation, Health Centre, Philadelphia, 429
 Child Hygiene, Bureau of, Division of Health, Cleveland, 424
 Child Hygiene Com., R. I. Branch, Natl. Cong. Mothers, 440
 Child Hygiene, Departments of. *See Reports of Affiliated Societies under* XVII
 Child Hygiene, Division of, 39, 40
 Child Welfare Assn. Binghamton, 405
 Niagara Falls, 417
 Children's Aid Society, Connecticut, 371
 Pennsylvania, 430
 Children's Dispensary and Hospital Assn., South Bend, 378
 Children's Free Hospital Assn., Detroit, 398
 Christian Service League of America, Wichita, 379
 Church, Frederick W., Report, 435
 Cincinnati, Jewish Infant Welfare Circle, 423
 Clarke, L. Freeman, Report, 393
 Clayton, S. Lillian, Report, 413
 Cleveland. Babies' Dispensary and Hospital, 424
 Bureau of Child Hygiene, 424
 Visiting Nurse Association, 425
 Western Reserve University, Maternity Dispensary, 426
 Cogill, Lida Stewart, M. D., Discussion, Obstetrics, 157

- Colds, Dangers of, in Children. *See Respiratory Diseases*, 68, 261
- Community Nursing in Dayton, Ohio, Elizabeth Gordon Fox, R. N., 305
- Conklin, Edwin G., Ph. D.,
Value of Negative Eugenics, 210
Discussion, 216
- Connecticut Children's Aid Society, 371
- Cooperation for Public Health, Richard P. Borden, 295, Discussion, 305
- Council Milk and Ice Fund, Baltimore, 385
- Crandall, Ella Phillips, Chairman, Session on Nursing and Social Work, 279, 293, 305, 314, 333, 339, 340, 343, 347
Discussion, 350, 354, 355
- Cross, Albert, Chairman, Session on Homeless Babies, 243, Report, 430
- Crum, F. S., Discussion, 83
- Cumberland, Md. Baby Welfare Section, Civic Club, 385
- Davidson, Sidney G., Discussion, 345, 352, 353, Report, 428
- Dearholt, Hoyt E., M. D., Report, 442
- DeLee, Joseph B., M. D., Progress Toward Ideal Obstetrics, 114
- Detroit, Children's Free Hospital Assn., 398
- Diet Kitchen Assn.,
Washington, 374
New York, 416
- Diet Kitchen, Orange, N. J., 404
- Dinneen, Nan, Report, 441
- District Nursing Assn., Providence, R. I., 433
- Division of Child Welfare, Health Dept., Milwaukee, 440
- Dublin, Louis F., Discussion, 81
- Duluth Consistory, Scottish Rite Masons, Infant Welfare Work, 399
- Eaton, Percival, M. D., Discussion, 84
- Economic Aspects of Infant Welfare, Discussion, 201
Wilbur, Cressy L., M. D., 203
Hastings, Charles J., M. D., 205
Putnam, Mrs. Wm. Lowell, 206
Murray, Dr., 206
Halsey, Olga L., 207
Kingsley, Sherman C., 207
- Economic Aspects of Infant Welfare, Session on, 161, Address by the Chairman, Sherman C. Kingsley, 162
- Edgar, J. Clifton, M. D.,
The Education, Licensing and Supervision of the Midwife, 90
Discussion, 136
- Education, Licensing and Supervision of the Midwife, J. Clifton Edgar, M. D., 90
- Emerson, Haven, M. D., Discussion, 82
- Emmons, Arthur B., 2nd., M. D., Discussion, 133, 154
- Environment. *See Eugenics*
- Etchberger, M. Frances, Report, 385
- Eugenics, Discussion:
Folks, Homer, LL. D., 216
Conklin, Edwin G., Ph. D., 216
Snow, Wm. F., M. D., 216, 218
White, Davenport, M. D., 240
Gregory, Emily Ray, Ph. D., 241
- Eugenics, Session on, 200
Value of Negative, Edwin G. Conklin, Ph. D., 210
- Executive Secretary, Report of, 21
- Exhibit, Traveling, 22
- Fargo, N. D., Associated Charities, 420
- Fife, Charles A., M. D., Chairman, Session on Pediatrics, 43
- Flies and Diarrheal Disease, 414
- Folks, Homer, Address of the President, Are Babies Worth Saving? Infant Welfare Work: Its Purposes, Opportunities and Agencies, 31, Discussion, 216
- Ford, C. E., M. D., Report, 425
- Foundlings, Care of. *See Session on Homeless Babies*
- Fox, Elizabeth Gordon, R. N., Community Nursing in Dayton, Ohio, 305, Discussion, 345
- Frankel, Lee K., Ph. D.,
Maternity Insurance, 173
Discussion, 156, 203
- Fresh Air Treatment of Respiratory Diseases, John Lovett Morse, M. D., 70
- Fulton, Gavin S., M. D., Discussion, Obstetrics, 151, Report, 333
- General Session, 27
- Generalization or Specialization? Marie T. Phelan, R. N., 333
- Gerstenberger, H. J., M. D., The Question of Smaller Nursing Districts for All Kinds of Public Health Work versus Larger Districts for Specialized Work, 314, 315
- Goler, George W., M. D., Report, 420
- Gregory, Emily Ray, Ph. D., Discussion, 241, 344, 346, 351, 353, 354
- Griffith, J. P. Crozer, M. D., Discussion, 78
- Guerrero, Manuel S., M. D., Report, 438
- Hall, Alice, Discussion, 351
- Halsey, Olga L., Discussion 201, 207
- Hamill, S. McC., M. D., Discussion, 77
- Hamilton, Ont., Babies' Dispensary Guild, 368
- Hansel, Chas. E., M. D., Report, 379
- Harris, Ella, Discussion, 270
- Harris, Mrs. Betsey L., Report, 389
- Hart, Hastings H., LL. D., Discussion, 265, 268
- Hastings, Charles J., M. D., Discussion, 205, 276, 343
- Haynos, Royal Storrs, M. D.,
The Prevention of Respiratory Disease in Early Life, 55
Discussion, 87
- Hazel, Barbara, Report, 423
- Health Bureau, Rochester, Infant Welfare Work, 419
- Health Dept., Division of Child Hygiene, Milwaukee, 440
- Montclair, N. J., Infant Welfare Work, 403
- Heath, Jeannette Gardner, Report, 440
- Heikkila, Blz., Report, 400
- Helmholz, H. F., M. D., Discussion, 340
- Heredity. *See Eugenics*
- Heritage Received from Parents, Methods of Developing or Modifying, Paul Popenoe, 233

- Hess, Alfred F., M. D.,
Institutions as Foster Mothers for Infants, 255
Discussion, 277, 278
- Hill, Mrs. Robert G., Discussion, 276
- Hirsh, A. B., M. D., Discussion, 205
- Holcomb, Elizabeth A., Report, 372
- Holt, L. Emmett, M. D., Discussion, 75
- Holyoke Infant Hygiene Assn., 393
- Homeless Babies, Care of, 243, 278
See Reports, Affiliated Societies under XV
- Hoobler, Raymond B., M. D., Discussion, 83, 203, 269, 270
- Hosford, G. L., Report, 380
- Hosley, W. A., M. D., Report, 398
- Huntington, James L., M. D., Discussion, Obstetrics, 158, Report, 139
- Infant Hygiene Assn., Holyoke, 393
- Infant Mortality, A Statistical Study of Respiratory Diseases as a Factor in the Causation of, Wm. C. Woodward, M. D., 44
Economic Aspects of, Sherman C. Kingsley, 162
- Infant Welfare Assns. (*See Reports of Affiliated Societies*)
- New Haven, 372
- Jacksonville, Fla., 377
- Chicago, 377
- Minneapolis, 400
- Infant Welfare, Economic Aspects of, 161
- Infant Welfare Nursing, Report of a Study of Selected Communities, Bessie S. Le Lacheur, 281
- Infant Welfare Work, Its Purposes, Opportunities and Agencies, Homer Folks, LL. D., 31
- Infants' Home and Hospital, Milwaukee, 441
- Infants, Institutions as Foster Mothers for, Alfred F. Hess, M. D., 255
- Institutional Care, Infants. *See Session on Homeless Babies*
- Institutions as Foster Mothers for Infants. Alfred F. Hess, M. D., 255
Discussion:
Hart, Hastings H., LL. D., 265, 268
Quennell, Mrs. J. M., 267, 268
Hoobler, R. B., M. D., 269, 270
Harris, Ella, 270
Knox, J. H. M., M. D., 271
Solenberger, Edwin D., 272
Johnston, Collins H., M. D., 273
Babbitt, Ellen C., 274
Levy, Julius, M. D., 274
Wall, Joseph S., M. D., 275
Hastings, Charles J., M. D., 276
Hill, Mrs. Robt. G., 276
Baker, S. Josephine, M. D., 277, 278
Hess, Alfred F., M. D., 277, 278
- Instructive District Nursing Assn., Boston, 386
- Insurance, Maternity, Lee K. Frankel, Ph. D., 173
- Is the Midwife A Necessity? J. M. Baldy, M. D., 105
- Jacksonville, Fla., Infant Welfare Society, 377
- Jacobi, Abraham, M. D., Discussion, 85
- Jewish Infant Welfare Circle, Cincinnati, 423
- Johnston, Collins H., M. D., Discussion, 273
- Johnstown, Pa., Associated Charities, 434
- Jones, Albert L., Report, 434
- Kellogg, J. H., M. D., Report, 398
- Kerr, Anna W., Discussion, 349, 350, 351, 352
- Kingsley, Sherman C., Chairman. Session on Economic Aspects of Infant Welfare, 161
Discussion, 202, 203, 207
- Knipp, Gertrude B., Report of Executive Secretary, 21
- Knox, J. H. M., Jr., Discussion, 271, 347
Report, 385
- Kob, Elizabeth, Report, 436
- Kosmak, George W., M. D., Discussion, 133
Report, Obstetrics, 141
- Lee, Viola M., Report, 406
- Leete, Harriet L., Discussion, 344
Report, 425
- Legislation Affecting Motherhood. *See Maternity Insurance*
- Vital Statistics, 79, 203
- Leighton, Frederick, M. D., Report, 419
- Le Lacheur, Bessie, Discussion, 352
Report of a Study of Selected Communities Where Infant Welfare Nursing is Done on a Small Scale, 281
- Levy, Julius, M. D., Discussion, 274
- Lexington, Ky., Baby Milk Supply Assn., 380
- Liga Nacional Para la Proteccion de la Primera Infancia, Philippine Islands, 436
- Lobedan, E. T., M. D., Report, 441
- Locke, E. M., Report, 393
- Lockwood, Miss., Discussion, 346
- Louisville, Ky., Babies' Milk Fund Assn., 381
- Lynch, Margaret, Report, 381
- MacDonald, Helen R., Report, 370
- McBride, T. Arthur, Report, 371
- McKnight, Eliza, Chairman, Round Table Conference, 349, 352, 353, 354, 355
- McLanahan, Austin, Report of Treasurer, 26
- Madeira, Edith, Discussion, 345
- Maryland Assn. for Study and Prevention of Infant Mortality, 383
- Massachusetts Babies' Hospital, Boston, 386
- Milk Consumers' Assn., Boston, 387
- Masse, Miss, Discussion, 353, 354
- Maternity Insurance, Lee K. Frankel, Ph. D., 173
History of, 174
Germany, 181
Austria, 184
Norway, Denmark, 185
Belgium, Hungary, 186
Luxemburg, Italy, 186
Servia, Switzerland, 187
Great Britain, 187
Russia, Sweden, 188
Australia, Rumania, 189
Bibliography, 195

- Maternity Insurance, Discussion:
 Halsey, Olga L., 201, 207
 Kingsley, Sherman C., 202, 203, 207
 Frankel, Lee K., Ph. D., 203
 Hoobler, Raymond B., M. D., 203
 Hirsh, A. B., M. D., 205
 Roussel, Albert E., M. D., 206
 Shea, W. K., M. D., 207
 Membership List, 24, 443
 Methods of Developing or Modifying in each
 Child During his Growth to Maturity
 the Heritage Received from his Parents,
 Paul Popenoe, 233
 Midwife Act (England), 95, 100
 Midwife, A Necessity? J. M. Baldy, M. D.,
 105
 Midwife, Education, Licensing and Supervision
 of, J. Clifton Edgar, M. D., 90,
 Bibliography, 91, 92, 94, 96
 Midwives. *See Session on Obstetrics*
 Schools for, 93, 94, 95, 97, 104, 108, 112,
 128, 147, 148, 413
 Substitute Agencies for, 120, 126, 134,
 137, 144, 145, 150, 152, 155, 157
 Milk and Baby Hygiene Assn., Boston, 388
 Milwaukee, Anti-Tuberculosis Assn., 442
 Division of Child Welfare, Health Dept.,
 440
 Infants' Home and Hospital, 441
 Minneapolis Infant Welfare Society, 400
 Montclair, N. J., Board of Health, 403
 St. Vincent's Nursery and Babies' Hospital,
 403
 Montreal, University Settlement Milk Station,
 370
 Morse, John Lovett, M. D.,
 The Treatment of Respiratory Diseases,
 with Special Reference to the Value of
 Fresh Air, 70
 Discussion, 88
 Mortality, Reduction of, Among Institutional
 Babies, S. Josephine Baker, M. D.,
 244
 Morton, Mrs. David, Discussion, Obstetrics,
 153
 Motherhood, Preparation for, Florence H.
 Richards, M. D., 229
 Murray, Dr., Discussion, 206
 Murphy, I. J., M. D., Report, 403
- National Committee for Prevention of
 Blindness, New York, 408
 National Conference on Race Betterment,
 388
 National League of Nursing Education, New
 York, 413
 New Haven Infant Welfare Assn., 372
 New York:
 Babies' Welfare Assn., 407
 National Committee for Prevention of
 Blindness, 408
 National League of Nursing Education,
 413
 Assn. for Improving Condition of the
 Poor, 414
 Diet Kitchen Assn., 416
 Niagara Falls Child Welfare Assn., 417
 Nicholson, Wm. R., M. D., Discussion, 123
 Nursing and Social Work, Discussion:
 Baker, S. Josephine, M. D., 337
 Beard, Mary, 339
 Helmholtz, H. F., M. D., 340
 Brown, Alan, M. D., 341
 Stringer, Elizabeth, 342
 Putnam, Mrs. Wm. Lowell, 343
 Hastings, C. J., M. D., 343
 West, Mrs. Max, 343
 Leete, Harriet L., 344
 Gregory, Emily Ray, Ph. D., 344, 346
 Amerman, Bessie E., 345
 Fox, Elizabeth G., R. N., 345
 Madeira, Edith, 345
 Davidson, Sidney, 345
 Lockwood, Miss, 346
 Borden, Richard P., 346
 Knox, J. H. M., Jr., M. D., 347
 Nursing and Social Work, Round Table Conference,
 349
 Kerr, Anna W., 349, 350, 351, 352
 Crandall, Ella P., 305, 350, 354, 355
 Hall, Alice, 351
 Stone, Ellen A., M. D., 351
 Gregory, Emily Ray, Ph. D., 351, 353,
 354
 Le Lacheur, Bessie, 352
 Davidson, Sidney, 352, 353
 Masse, Miss, 353, 354
 Nursing and Social Work, Session on, 279
 Nursing, Community, in Dayton, Ohio,
 Elizabeth Gordon Fox, R. N., 305
 Nursing, Generalized versus Specialized.
See Session on Nursing and Social Work
- Obstetrics, Progress Toward Ideal, Joseph
 B. DeLee, M. D., 114
 Obstetrics,
 Reports of Sub-Committees:
 New England, 139
 New York and New Jersey, 141
 Kentucky, 144
 California, 145
 Hawaiian Islands, 147
 Philippine Islands, 148
 Japan, 148
 Oakland, Alameda and Berkeley, 149
 Round Table Conference
 Fulton, Gavin, S., M. D., 151
 Morton, Mrs. David, 153
 Putnam, Mrs. Wm. Lowell, 153, 158
 Emmons, Arthur B., 2nd, M. D., 154
 Frankel, Lee K., Ph. D., 156
 Waldron, L. V., M. D., 156
 Cogill, Lida Stewart, M. D., 157
 Huntington, James L., M. D., 158
 Sherwood, Mary, M. D., 153, 158
 Session on, 89
 Discussion:
 Nicholson, Wm. R., M. D., 123
 Williams, J. Whitridge, M. D., 125
 Baker, S. Josephine, M. D., 127
 Benz, H. J., M. D., 129
 Woodward, Wm. C., M. D., 132
 Emmons, Arthur B., 2nd, M. D., 133
 Kosmak, George W., M. D., 133
 Williams, Linsly R., M. D., 135
 Edgar, J. Clifton, M. D., 136
 Baldy, J. M., M. D., 137
 Obstetrics, Teaching of, 91, 92, 115, 117,
 126, 133, 151, 159, 160
 Ophthalmia Neonatorum, 408. *See Reports*
Affiliated Societies under XIV
 Orange, N. J., Diet Kitchen, 404

- Pediatrics, Session on, 43
 Discussion, 75
- Pennsylvania, Children's Aid Society, 430
- Phelan, Marie T., R. N., Generalization or Specialization? 333
- Philadelphia, Babies' Hospital, 427
 Babies' Welfare Assn., 428
 Child Federation, Health Centre, 429
 Children's Aid Society, 430
 Starr Centre Association, 432
- Philippine Islands, Liga Nacional Para La Proteccion de la Primera Infancia, 436
- Pisek, Godfrey R., M. D., Discussion, 81
- Popenoe, Paul, Methods of Developing or Modifying in each Child During his Growth to Maturity the Heritage Received from his Parents, 233
- Possible Reduction of Mortality Among Sub-Normal Institutional Babies, S. Josephine Baker, M. D., 244
- Prenatal and Obstetrical Committee, Women's Municipal League, Boston, 391
- Prenatal Care, 125, 128, 141, 151, 157, 160, 218, 219, 228, 240, 282, 284, 288
See Discussion, Session on Obstetrics
See Reports Affiliated Societies under VIII. to XI.
- Prenatal Care Records, Committee Report, 357
- Prenatal Care, Record Forms, 359
- Prenatal Problem and the Influences which May Favorably Affect this Period of the Child's Growth, Mrs. Max West, 219
- Preparation for Motherhood, Florence H. Richards, M. D., 229
- President's Address, 81
- Prevention of Respiratory Disease in Early Life, Royal Storrs Haynes, M. D., 55
- Pritz, Mrs. Carl E., Report, 423
- Progress Toward Ideal Obstetrics, Joseph B. DeLee, M. D., 114
- Proprietary Preparations, To What Extent may the Mother Substitute for the Advice of a Physician? Carl L. Alsberg, M. D., 197
- Providence, R. I., Baby Welfare Committee, 438
 District Nursing Assn., 439
 Public Health Assn., St. Paul, 402
 Public Health, Cooperation for, Richard P. Borden, 295
 Public Health Nursing. *See Session on Nursing and Social Work*, 281
 Public Health Work, Smaller Nursing Districts versus Larger Districts, H. J. Gerstenberger, M. D., 315
 Putnam, Mrs. Wm. Lowell, Discussion, 153, 158, 206, 343
 Reports, 358, 388, 392
- Quennell, Mrs. J. M., Discussion, 267, 268
- Question of Smaller Nursing Districts for All Kinds of Public Health Work versus Larger Districts for Specialized Work, H. J. Gerstenberger, M. D., 315
- Race Betterment, National Conference on, 398
- Report: Committee on Prenatal Care Records, 357
 Executive Secretary, 21
 Sixth Annual Meeting, 15
- Sub-Committees on Obstetrics, 139
 Treasurer, 26
- Report of a Study of Selected Communities Where Infant Welfare Nursing is Done on a Small Scale, Bessie S. Le Lacheur, 281
- Reports, Affiliated Societies, 365
 Resolutions, Philadelphia Meeting, 18
- Respiratory Disease in Early Life, The Prevention of, Royal Storrs Haynes, M. D., 55
- Respiratory Disease, A Statistical Study of, as a Factor in the Causation of Infant Mortality, Wm. C. Woodward, M. D., 44
- Respiratory Diseases, The Treatment of, with Special Reference to the Value of Fresh Air, John Lovett Morse, A. M., M. D., 70
- Discussion:
 Holt, L. Emmett, M. D., 75
 Hamill, S. McC., M. D., 77
 Griffith, J. P. Crozer, M. D., 78
 Wilbur, Cressy L., M. D., 79
 Dublin, Louis F., 81
 Pisek, Godfrey R., M. D., 81
 Emerson, Haven, M. D., 82
 Hoolber, Raymond B., M. D., 83
 Crum, F. S., 83
 Eaton, Percival, M. D., 84
 Jacobl, Abraham, M. D., 85
 Woodward, Wm. C., M. D., 86
 Haynes, Royal Storrs, M. D., 87
 Morse, John Lovett, M. D., 88
- R. I. Branch, Natl. Congress Mothers, 440
- Richards, Florence H., M. D., Preparation for Motherhood, 229
- Rochester Health Bureau, Infant Welfare Work, 419
- Round Table Conference:
 Nursing and Social Work, 349
 Obstetrics, 189
- Roussel, Albert E., M. D., Discussion, 206
- St. Paul, Public Health Assn., 402
- St. Vincent's Nursery and Babies' Hospital, Montclair, N. J., 403
- Schlutz, F. W., M. D., Report, 402
- Sessions:
 General, 27
 Pediatrics, 43
 Obstetrics, 89
 Economic Aspects of Infant Welfare, 161
 Eugenics, 209
 Homeless Babies, 243
 Nursing and Social Work, 279
 Round Table Conferences, 139, 349
 Shaver, Elisabeth, Reports, 144, 383
 Shea, W. K., M. D., Discussion, 207
 Sherwood, Mary, M. D., Chairman, Session on Obstetrics, 89, 139, 153, 158, 160
 Smith, Mrs. David S., Report, 373
 Snow, Wm. F., M. D., Chairman, Session on Eugenics, 209
 Discussion, 216, 218
 Social Insurance. *See Maternity Insurance*
 Social Work, Session on Nursing and, 279
 Society for Helping Destitute Mothers and Infants, Boston, 392
 Solenberger, Edwin D., Discussion, 272
 Report, 432
- South Bend, Children's Dispensary and Hospital Assn., 378

- Spencer, Emma A., Report, 404
 Springfield, Mass., Baby Feeding Assn., 396
 Starr Centre Association of Philadelphia, 432
 Statistical Study of Respiratory Diseases as a Factor in the Causation of Infant Mortality, Wm. C. Woodward, M. D., 44
 Stebbins, Mrs. Elwyn, Report, Obstetrics, 149
 Stillbirths, 132
 Stone, Ellen A., M. D., Discussion, 351
 Stringer, Elizabeth, Discussion, 342
 Terry, C. E., M. D., Report, 377
 Thacker, George R., Report, 385
 Thompson, Mrs. Wm., Report, 386
 To What Extent May the Mother Substitute Proprietary Preparations for the Advice of a Physician? Carl L. Alsborg, M. D., 197
 Treasurer, Report of, Austin McLanahan, 26
 Treatment of Respiratory Diseases, with Special Reference to the Value of Fresh Air, John Lovett Morse, A. M., M. D., 70
 Twilight Sleep, 135, 158
 University Settlement Milk Station, Montreal, 370
 Utter, Henry E., M. D., Report, 438
 Value of Negative Eugenics, Edwin G. Conklin, Ph. D., 210
 Van Blarcom, Carolyn C., Report, 413
 Varick, Mrs. W. R., Report, 405
 Visiting Nurse Assn., Cleveland, 425
 York, Pa., 435
 Visiting Nurse Assns. *See Session on Nursing and Social Work*
 Vital Statistics,
 Wilbur, Cressy L., M. D., 79, 203
 Woodward, W. C., M. D., 44
 Waldron, L. V., M. D., Discussion, Obstetrics, 156
 Wall, Joseph S., M. D., Discussion, 275, Report, 376
 Washington Diet Kitchen Assn., 374
 Welles, Mrs. E. P., Report, 378
 West, Mrs. Max, Discussion, 343
 The Prenatal Problem and the Influences which May Favorably Affect this Period of the Child's Growth, 219
 Western Reserve University Maternity Dispensary, Cleveland, 426
 Wet-Nurse Directory of Boston, George R. Bedinger, 252
 Wet Nursing. *See Homeless Babies*
See Reports, Affiliated Societies under XV.
 Wheeler, Estelle L., Report, 376
 White, Davenport, M. D., Discussion, 240
 Wichita, Christian Service League of America, 379
 Wilbur, Cressy L., M. D., Discussion, 79, 203, Report, 358
 Williams, J. Whitridge, M. D., Chairman, Committee on Prenatal Care Records, 358, Discussion, 125
 Williams, Linsly R., M. D., Discussion, 135
 Woodward, Wm. C., M. D., A Statistical Study of Respiratory Diseases as a Factor in the Causation of Infant Mortality, 44
 Discussion, 86, 132
 York, Pa., Visiting Nurse Assn., 435

